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Implementation of Flutter-based Learning Management System (LMS) at Universitas Andi Djemma Palopo

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Keywords: Learning Management System, LMS, Flutter, Firebase, Android.

Abstract

Learning Management System (LMS) is a tool that is essential to redound an interaction between instructor and the learners and considering the technology headway nowadays (gadget). Therefore, research has been made to develop an LMS application for mobile devices in Universitas Andi Djemma Palopo, especially in the informatics engineering department using the Flutter framework. The method used for this research is R&D which stands for Research and Development with ADDIE Development Model, Analysis, Design, Development, Implementation, and Evaluation. The result of this research is known: 1) This application (LMS) made using the Flutter framework and Firebase database simplifies the development process; 2) This application was made for the informatics engineering department, Universitas Andi Djemma Palopo. This mobile app has several useful features, including making a class, class discussion, making subjects, assignments, and attendance; 3) The LMS implementation uses a questionnaire based on usability and has been obtained with an eligibility percentage of 83.03%. The app has been declared as very feasible based on the eligibility percentage.

1. INTRODUCTION

Since 1945, the national education curriculum has changed in history, namely in 1947, 1952, 1964, 1968, 1975, 1984, 1994, 2004, and the 2006 curriculum. All national curricula are designed based on the same foundation, namely Pancasila and the Constitution. 1945, the difference is in the main emphasis of the goals of education and the approach to realizing it. The curriculum changes are, of course, accompanied by different educational purposes because, in each of these changes, there is a certain goal to be achieved to advance our national education (Wirianto, 2014).

In line with these developments, information technology has also developed at a very high speed, changing society's paradigm in seeking and obtaining information, which is no longer limited to newspaper, audio-visual, and electronic information but also information technology. Other sources of information, one of which is through the Internet (Elyas, 2018), especially smartphone devices, and especially in education, are used as a learning medium. Learning Media, in general, are teaching and learning process tools (Mutia et al., 2019).

Education is a process of communication from educators to students that contain educational information, which has elements of educators as sources of information, media as a means of presenting ideas and educational materials, and students themselves. Some aspects of This approach get a touch of information technology media, thus sparking the birth of the concept of e-learning (Utomo, 2001).

E-learning is a teaching and learning tool that uses electronic circuits (LAN, WAN, or internet) to deliver learning content, interaction, or guidance (Koran, 2001). E-learning certainly refers to internet technology to provide a series of solutions that can improve knowledge and skills (Rosenberg, 2003). The term "e" or the abbreviation of electronics in e-learning is used for all technologies used to support teaching efforts through internet electronic technology. (Purbo and Hartanto, 2002). E-learning itself is a method in general, and of course, it has many implementations in different devices or conditions, one of which is the Learning Management System or LMS. These devices are very useful considering that humans are currently in the

Coronavirus Disease (Covid-19) pandemic. The Ministry of Education and Culture (Kemendikbud) has asked all universities to provide learning facilities during the Covid-19 emergency at the university level. Helping the government and the community to learn from home, work from home, and carry out social restrictions to break the chain of the spread of Covid-19 (Wijaya et al., 2020).

Based on regulations issued by the local government, Universitas Andi Djemma Palopo itself has also implemented social restrictions in the teaching and learning process, so lecturers and students must use electronic learning media available on the internet. However, learning platforms tend not to have full features following the needs of lecturers in general at Universitas Andi Djemma Palopo. They had an internal LMS that has added value in increasing university credibility. Based on that, e-learning management (LMS) is needed to meet the needs of teaching staff and students at Universitas Andi Djemma Palopo.

2. METHOD

2.1 Research Procedure

The method used in this research uses the ADDIE development model popularized by Robert Maribe Branch, a development research model consisting of five stages: Analysis, Design, Development, Implementation, and Evaluating (Branch, 2009). The description of each step is (Sugiyono, 2013):

a. Analysis
In analyzing, researchers need two things: problems and needs. Problems obtained from the data collection results will then produce requirements, and these needs will later become the basis for making the system. Data collection will be carried out through literature studies, interviews, and observations to obtain the necessary information. Of course, the information is used as a reference used in subsequent stages.

b. Design
After getting the information needs, the next stage is making a prototype or the application design process, which will be displayed in the form of black lines and writing on a white background and will later resemble the appearance of a smartphone application.

c. Development
Development is the core stage of making the system or application itself. It can be called the realization process of the design results that have been made or is commonly referred to as coding. Coding is done to produce a program or application in the form of a solution to existing problems and the requested needs. The IDE used is Visual Studio Code, Flutter as a development framework, and Firebase Services as a DBMS.

d. Implementation
Implementation is the stage where the application that has been built will be used directly by the user according to the original function or purpose, but only for limited trials.

e. Evaluating
The evaluation stage is the process of correcting the shortcomings of the application made after being tested. Because the trials are limited, the improvements made are also minor.

2.2 Data Analysis

Data analysis conducted results from a questionnaire where each question has its weight. Of course, the questions refer to the usability context of the e-learning application or in the sense that the test is carried out with a usability format questionnaire. Testing the questionnaire with usability format using descriptive analysis data techniques with the following calculations:

$$Eligibility\ Percentage = \frac{Score\ Obtained}{Maximum\ Score} \times 100\% \qquad (1)$$

After getting the score data from the test results, the percentage is calculated using the formula. After that, the results rate is converted into a statement according to the following interval percentage table (Sudaryono, 2015).

Table 1. Interval Percentage

No.	Percentage	Criteria
1	0% - 25%	Extremely not feasible
2	26% - 50%	Not feasible
3	51% - 75%	Feasible
4	76% - 100%	Very feasible

3. RESULT AND DISCUSSION

3.1 Analysis

After interviewing several sources, the conclusions drawn from these activities are: 1) The learning management system in Informatics Engineering Department at Universitas Andi Djemma Palopo uses several online platforms provided on the internet, which means it does not yet have a learning platform. 2) The platforms used also tend not to have some of the desired features; for example, attendance is done on different applications, or other platforms are only asynchronous, so they must use another platform again. 3) The device chosen to conduct online learning is a smartphone because it is easier to use and is mobile. Therefore, creating a learning platform that can back up several features in one application/platform is necessary.

The observation phase was carried out at the research site to observe how the conventional (face-to-face) learning process took place and online learning. During this pandemic, education tends to be done online to reduce the risk of spreading the virus so that conventional learning processes are rarely carried out anymore. However, learning procedures must comply with health protocols. In online learning, the platforms often used are Google Classroom, Zoom, Zoho (attendance), Microsoft Teams, and other media that can obtain on the internet for free or paid.

3.2 Design

A system overview in the form of a use case diagram is made from this stage, which will be developed later (Figure 1). The activity diagram will be described per user, namely lecturers and students (Figure 2) and (Figure 3). At the endpoint of the activity diagram of lecturers and students, there is a "melakukan kegiatan pembelajaran" activity, and the intended actions are illustrated in the generalization of the use case (Figure 1).

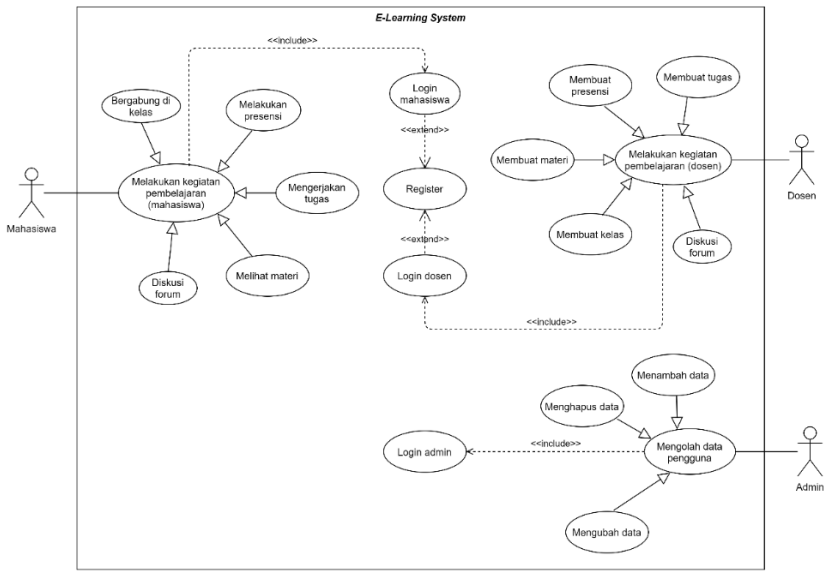

Figure 1. *Use case Diagram LMS*

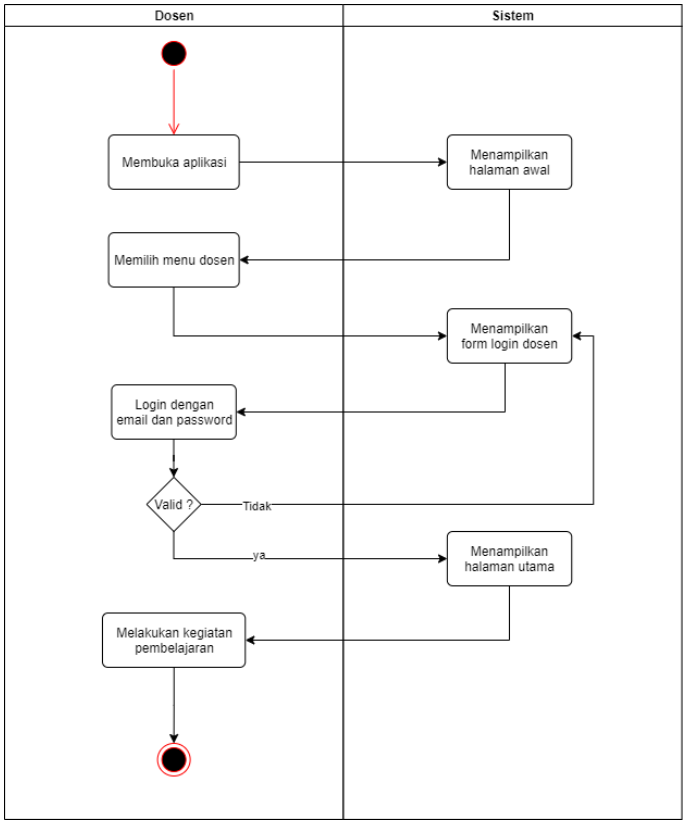

Figure 2. Lecturers' Diagram Activity

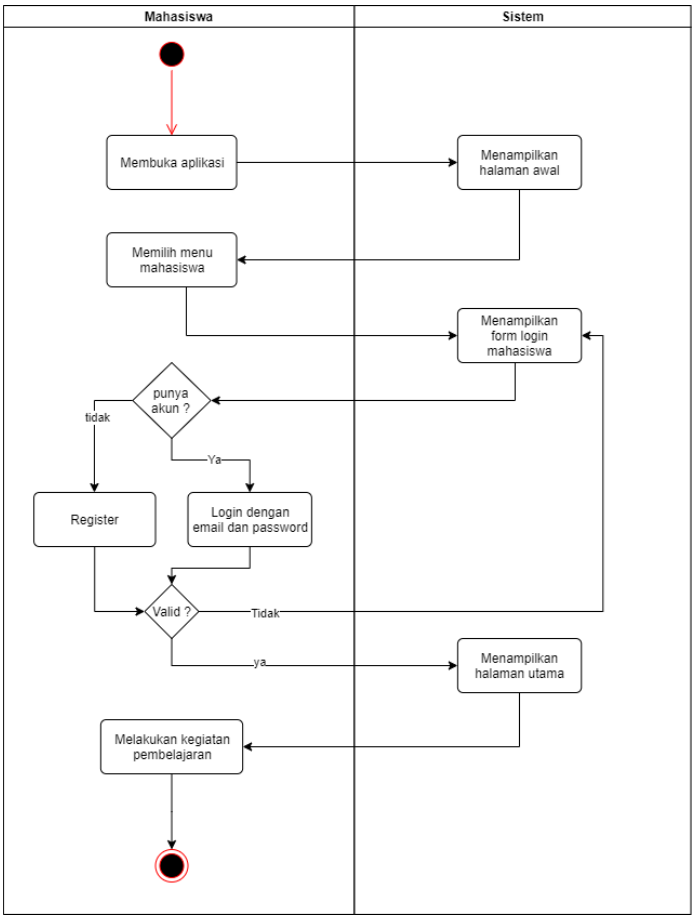

Figure 3. Students' activity diagram

After finding problems from interviews and observations and describing solutions to problems using use case diagrams and activity diagrams. Then the initial design of the system display will be made, which can be seen in the following figure:

Figure 4. Splash screen

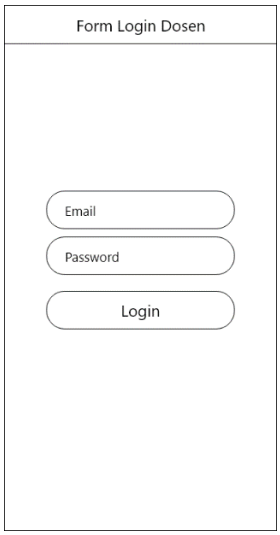

Figure 5. Lecturers' login form

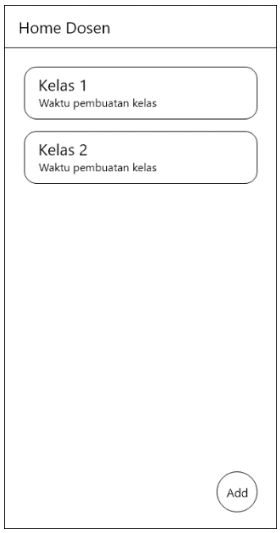

Figure 6. Lecturers' Home screen

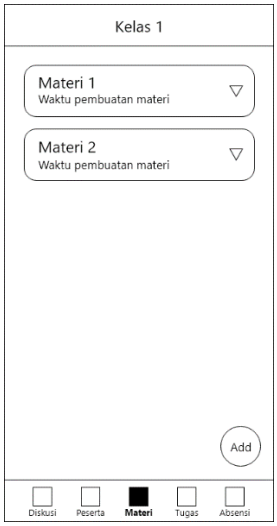

Figure 7. Class details tabs (lecturers)

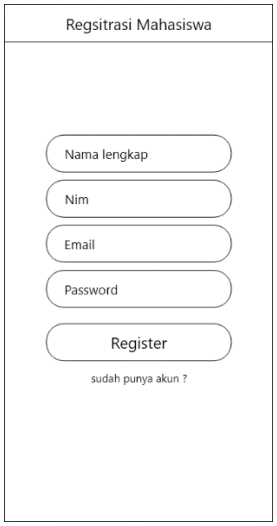

Figure 8. Students' registration form

Figure 9. Class discussion tabs

3.3 Development

The system is developed using Flutter, an open-source SDK or framework developed by Google to create applications that can run on Android and iOS operating systems (Dian, 2018). Using Flutter is fairly easy to create user interfaces because Flutter uses the concept of widgets to create text, forms, and buttons. A widget is needed for each component; here are the results of the realization of the design phase using the Flutter:

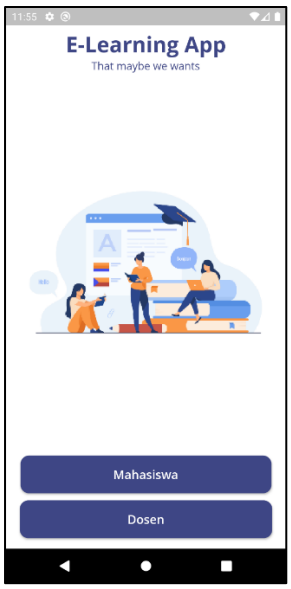

Figure 10. Initial view

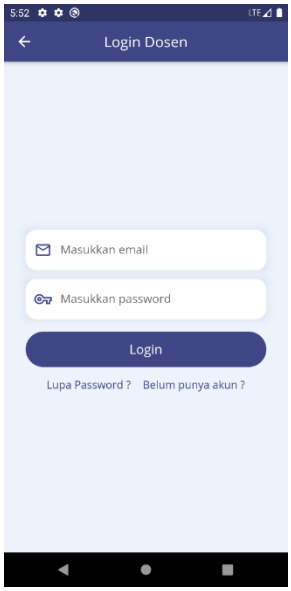

Figure 11. Lecturers' login form

Figure 12. Lecturers' Home screen

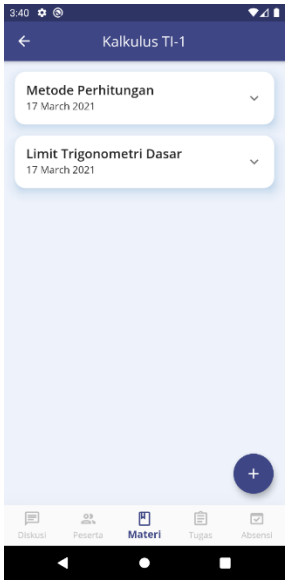

Figure 13. Lecturers' class detail

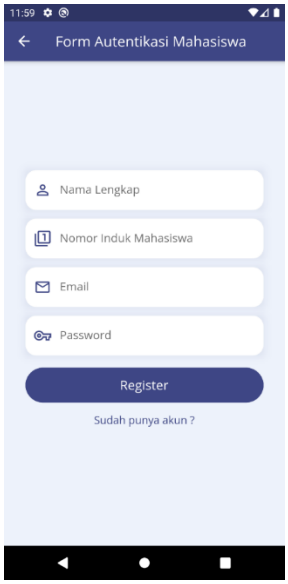

Figure 14. Students' registration form

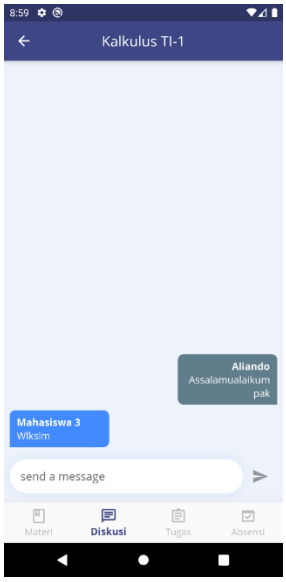

Figure 15. Class discussion

The database system used as data storage for the application is Firebase. Firebase is a platform for real-time applications. When the data changes, the application connected to Firebase (website or mobile app) will update it directly (Sanad et al., 2018). Firebase has a complete library for most web and mobile platforms and can be combined with other frameworks such as node, java, javascript, and others (Dinesh, 2017). The services used in Firebase are:

a. Authentication

Authentication is used to store credential data by users who log into the application. This service is equipped with complete methods to simplify the development process, especially in the back-end. The methods used in this application are login, register, and forget the password.

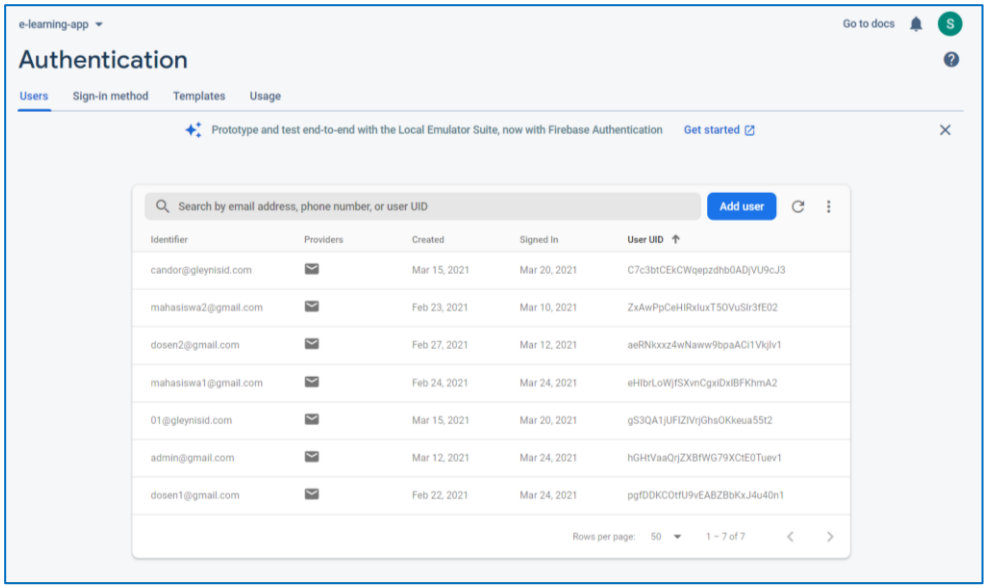

Figure 16. Firebase Authentication

b. Firestore

Cloud Firestore is a flexible and scalable database for mobile, web, and server development (Firebase, 2018). Firestore is used to store data in text or information that is later displayed in the application later in real-time. The user does not need to refresh/reload the application to get the latest data, which is one of the advantages of Firebase Firestore.

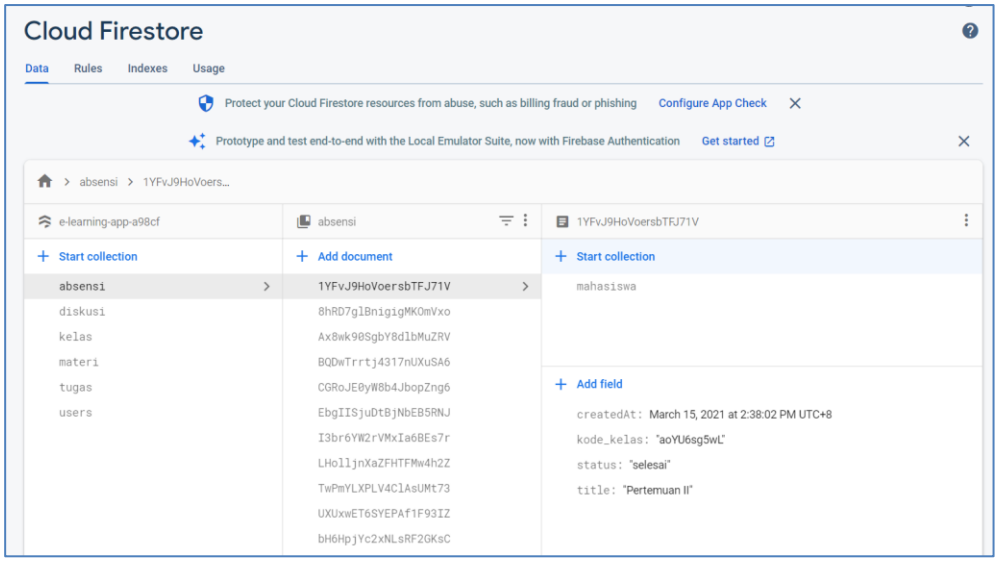

Figure 17. Firebase Firestore

c. Storage

Storage is used to store files that have been uploaded into the application in the form of snapshots of attendance signatures, lecturer material files, and student assignments. The data is stored in a bucket (directory) in storage named according to the class's class code created by the lecturer.

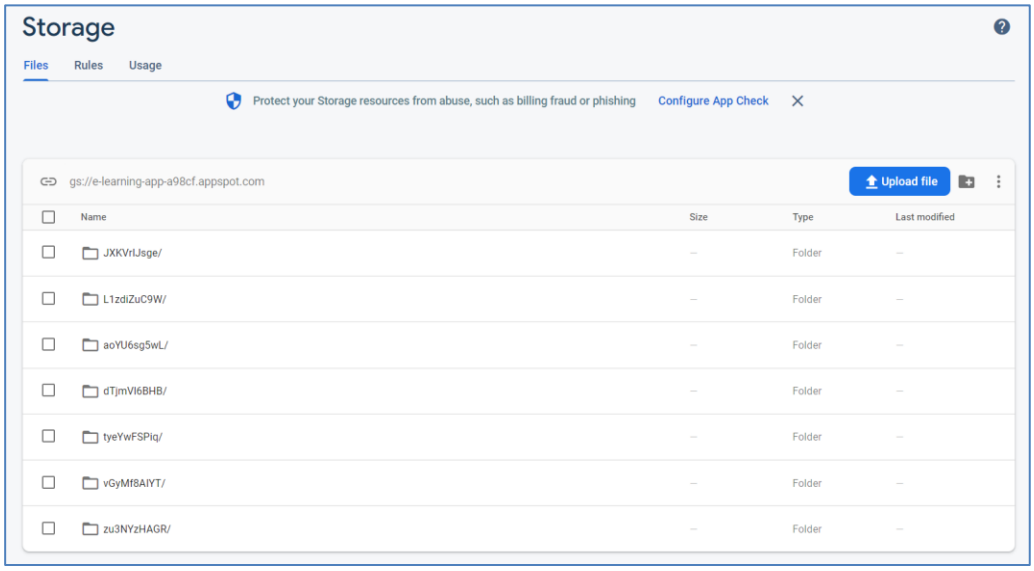

Figure 18. Firebase Storage

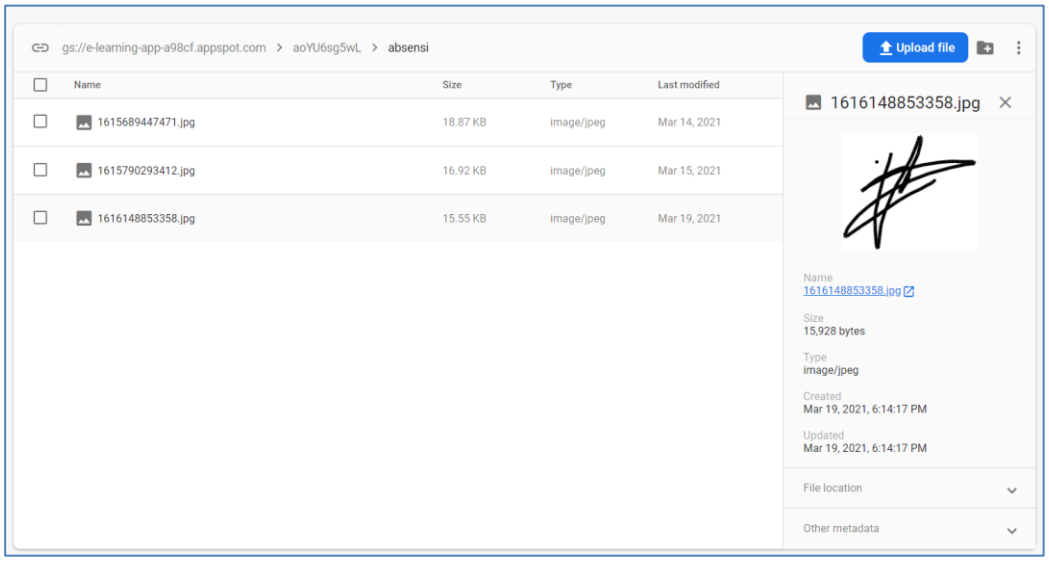

Figure 19. Firebase Storage Bucket

3.4 Implementation

The implementation/testing was carried out on a limited basis due to the COVID-19 pandemic to minimize virus spreads. In this testing, one user was selected as a lecturer to log in according to his role, and the rest became students who would join the class created by the lecturer. Students then carry out learning activities using the features provided in the LMS application.

3.5 Evaluation

The evaluation stage uses the formula described before. The results of the tabulation scores from the questionnaire data are in the following table:

Table 2. Questionnaire data tabulation

Responden	*Usefullness*						*Easy to Use*								*Easy to Learn*				*Satisfaction*						Skor yang didaptkan	Skor maksimal
	p1	p2	p3	p4	p5	p6	p7	p8	p9	p10	p11	p12	p13	p14	p15	p16	p17	p18	p19	p20	p21	p22	p23	p24		
1	3	3	4	4	4	4	3	3	3	4	3	3	3	3	3	3	3	4	4	4	3	4	4	4	83	96
2	3	3	3	3	3	4	4	4	4	3	3	3	4	4	4	3	3	3	3	2	3	3	3	3	78	96
3	3	3	4	4	3	3	3	3	4	3	3	3	3	3	3	3	3	3	4	4	3	3	3	3	77	96
4	4	4	4	4	4	3	3	3	4	3	3	4	4	4	4	3	4	3	3	4	4	4	3	4	87	96
5	3	3	4	3	3	3	3	3	2	2	3	3	3	2	3	3	4	4	2	3	2	3	3	3	70	96
6	3	3	4	3	4	4	3	3	3	3	3	4	4	4	4	4	4	4	4	4	3	4	4	3	86	96
7	4	3	4	3	4	4	3	3	3	4	2	3	2	4	3	3	3	2	4	4	4	4	4	4	81	96
8	3	2	4	4	3	3	3	4	3	3	3	4	4	4	3	4	4	4	3	4	4	3	4	4	84	96
9	4	3	3	3	3	3	3	3	3	3	4	4	4	4	3	4	3	3	4	4	3	3	4	4	82	96
10	3	3	4	3	3	4	3	3	4	4	3	3	3	4	3	3	3	3	3	3	3	4	3	4	79	96
11	4	3	3	3	3	3	3	3	2	4	2	3	3	4	3	3	4	3	3	4	3	3	4	3	76	96
12	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	4	3	2	3	3	3	3	3	3	73	96
13	3	4	3	4	2	2	3	3	4	4	3	4	4	3	4	3	4	3	3	4	4	4	3	3	81	96
14	4	4	4	3	3	3	4	3	3	4	3	3	2	3	4	4	3	3	3	2	3	3	4	4	79	96
Total																									1116	1344

$$Eligibility\ Percentage = \frac{1116}{1344} \times 100\%$$

$$= 83.03\%$$

From these calculations, according to the interval percentage table, the LMS application is categorized at a very feasible percentage with a percentage score of 83.03%.

4. CONCLUSION

Based on the results and discussions that have been carried out. The LMS development process using the flutter framework, which is implemented in the Informatics Engineering Study Program, Universitas Andi Djemma Palopo, it can be concluded that: 1) The Learning Management System built has three core users, namely lecturers, students, and admins. Each user has features capable of conducting online learning, including creating/viewing materials, assignments, attendance, and discussing in a class forum; 2) The combination of the Flutter Framework and Firebase Database is beneficial in developing this application because the services provided by both Flutter and Firebase are complete and according to needs; 3) The data obtained from the questionnaires have been analyzed and resulted in a eligibility percentage level reaching 83.03%, which means that this e-learning application is suitable for use on a particular scale and has stable performance.

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Critical Success Factor for Labuhan Bajo Airport Public-Private Partnership Investment Pilot Project

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Keywords
PPP; financing; pilot project; airport

Abstract

The government often faces budget constraints and financial gaps between necessity and real allocation funds. It makes them must be more selective when prioritizing infrastructure development. Moreover, providing adequate transport infrastructure and sustainability is crucial for the government. Government must innovate by creating a conducive investment climate to encourage the participation of private and state-owned enterprises in infrastructure financing. Innovation financing through Private Funding and PPP schemes is directed to infrastructure with high economic and financial feasibility. PPP schemes in the air transportation sector particularly in Indonesia have not been successfully implemented until 2018. Therefore, the government has initiated several PPP projects as pilot projects to encourage PPP implementation in the Transportation Sector. One of them is Labuan Bajo International Airport. Labuan Bajo Airport is in West Manggarai Regency as a gateway to enter the Komodo Island area. Labuan Bajo airport is one key infrastructure that supports The Big 5 Super Priority Destinations of Indonesia by the Indonesia Ministry of Tourism and Creative Economy. This paper aims to examine critical success factors and interfere factors of the PPP pilot project for Labuan Bajo Airport. This paper uses an exploratory descriptive method to examine every factor that supports the success of the PPP implementation process in the air transportation sector based on qualitative data. The study will also explore the planning process through analysis of PPP Book documents from 2010-2020 (content analysis) to historically examine the process of proposing PPP project activities and examine the factors that support the success or delay the PPP pilot project within the Ministry of Transportation based on stakeholder approach. The planning and preparation stage plays a critical role in efforts to prepare comprehensive, reliable, and feasible projects. The feasible project can minimize project uncertainty and gain attract private sector investment

1. INTRODUCTION

The inevitable infrastructure development challenge is government budget constraints. Initially, development funding was handled by conventional funding (government budget/APBN) but currently facing budget constraints made the paradigm shift through opening up opportunities for private involvement in developing and developed countries (Ng et al., 2012). Based on the National Medium-Term Development Plan (RPJMN), this shift is believed to accelerate the provision of infrastructure and increase economic growth in the medium and long term. The presence of the private sector is not only solving budget constraints but also providing optimal quality of infrastructure services (Gardaindonews, 2018) that adopt their experience and technology innovation (Fleta-Asín & Muñoz, 2020). The PPP scheme gives the public and private sector a mutual advantage through financial funding and the technical aspect (Aladag & Isik, 2018). Based on the 2020-2024 National Medium-Term Development Plan (RPJMN), there are three (3) funding schemes : 1) Private Funding and PPP schemes for projects that have high economic and financial feasibility (high value of IRR), 2) National Corporate funding for project that has high economic feasibility but still financially marginal, and

3) Government funding for basic service infrastructure that high economic feasibility, but not financially feasible.

Air transport infrastructure is crucial for Indonesia as the largest archipelago country with 17.508 islands scattered between the Indian and Pacific Oceans. The airport has a key role to connect the isolated area to the main region and transferring people and goods. Initially in Indonesia, most airports are not economically feasible even would be funded by National Budget. Budget constraints make the government must set priorities due to the allocation of new development airports (21 new airports), airport maintenance (238 airports). This condition makes the government only accommodates the demand-growth of traffic passengers in minimum service standards. The characteristics of airport development need high cost and a low value rate of Return (IRR) (Carnis & Yuliawati, 2013). Therefore, development needs several alternative financing schemes to face budget limitations including the PPP scheme, National Sharia Loan, foreign loan, and the utilization partnership scheme. The main airport that is presumably economically profitable, would be offered to the state's enterprise through utilization cooperation and the government only handled feeder airports to facilitate transport services in remote areas.

Based on Indonesia Presidential Regulation Number 38 of 2015, PPP is a collaboration between the government and Business Entities in the Provision of Infrastructure for the public interest by referring to the required specifications, which partially or wholly use the resources of the Business Entity with the risk-sharing between the parties. The Business Entities include State-Owned Enterprises, Regional-Owned Enterprises, private business entities, foreign legal entities, or cooperatives. PPP schemes in the airport sector until 2018 have not been successfully implemented, Government initiated a pilot project in Labuan Bajo Airport as a role model of the successful implementation. Labuan Bajo Airport is an airport supporting the Labuan Bajo tourist area in the West Manggarai Regency which was designated as one of "The Big 5 Super Priority Destinations of Indonesia" by the President of the Republic of Indonesia (Mediaindonesia, 2020). Labuan Bajo tourism destination is conducted to develop prime tourism destination that targets the middle and upper-class target market. In addition, Komodo Island as a worldwide unique tourism destination expectantly can promote the magnitude of tourism attractiveness. Based on the results of the DGCA study, the potential passenger demand for Labuhan Bajo Airport is huge. Potential demand for domestic and foreign tourists will reach 3,726,000 passengers in 2044 and the projected demand for international routes includes Singapore, Kuala Lumpur, Manila, and Bangkok. Bid Award was held in December 2019 and after the qualification process, the winner was determined. The auction winner who will operate Labuhan Bajo Airport is PT. Cinta Airport Flores (PT. CAF), a consortium of PT. Cardig Aero Services and Changi Airports Mena Pte Ltd (Idris, 2020).

The planning process includes choosing the project, selecting an appropriate scheme based on transport characteristics, preparing the PPP Document is the critical process. Most PPP Project proposals are rejected and unsuccessful attract investors. Therefore, Government set a pilot project PPP with full government support that is different from the previous PPP scheme process. Our research is structured to identify support factors and obstruct factors related to the successful implementation of the PPP pilot project. This research aim is to examine the support factors and interference factors of Labuan Bajo Airport as a PPP pilot project. This research uses a qualitative approach through the exploratory descriptive method. The methods will examine each factor that supports the success of the PPP implementation. The examination process will be based on 10 years PPP Book document to understand differences in the preparation planning stages related to previous unsuccessful projects. There are quite several studies that discuss the key success factors for PPP, but only this research that specifically discusses the pilot project at the airport is available in Indonesia as a developing country. The structure of this paper started with a literature review about the important support factors of the PPP implementation in section 2. Moreover, the next section will explain the brief method of collecting data, analysis method, and exploration in section 3. Discussion and analysis will be presented in section 4. In the end, the conclusion will be presented in section 5.

2. LITERATURE REVIEW

The PPP is not a transfer of government duty in providing public services. The PPP is a private investment in infrastructure projects in financing, design, development, appropriate maintenance, or operation through a government cooperation agreement (Bappenas, 2016). PPP projects on the source of funding or return investment can be based on fees for service usage (user charge) or payment by the Government based on the availability of services (availability payments) (Wibowo 2017). Airport concession scheme will be vary based on the airport sized such as Large Airport (international airport) by privatization, Medium Airport with self-supporting funding (National Govenrnment and Private Sector), while Small Airport using mixed scheme (basic and parking handled by local government, building by private sector and ATC facilities by national government. (Sugimura & Kato, 2021).

Based on Minister of Finance Regulation: 260/PMK.08/2016, Availability Payment is periodic payments by the Minister/Head of Institutions to the Business Entity for the availability of infrastructure services in accordance with the quality and/or criteria as specified in the PPP Agreement. The requirements of AP projects are no revenue from the service users, a project that is not financially feasible, or infrastructure is free of charge. There is a different characteristic for the airport as a node and highway as a network for PPP projects. PPP Project with AP schemes was implemented in the highway sector (Ryan and Menezes, 2014) and also by the user charge scheme (Ng, Wong and Wong 2012). PPP Scheme for airports usually user charge, not an availability payment. Most airport projects will gain optimal concession contracts by combining non-aeronautical revenue and aeronautical revenues (Engel et al., 2018). Non-aeronautical revenues such as shops, restaurants, hotels, and parking lot support airport primary services, whereas aeronautical revenues are revenues from passenger fees and airline fees (Engel et al., 2018). Therefore, user charges will be more optimum and beneficial rather than availability payment for economic potential airports. It will be different for the airport located in a remote area and non-economically feasible. Availability Payment is needed to maintain services and facilitate people from isolated areas. Knowing the best revenue scheme is crucial to gaining optimal revenue from PPP Projects. Before continuing to the discussion session, the determination of the variables should be explained as a brief literature review to complete this research as follows.

Table 1. PPP Implementation Succes Factor

No	Country	PPP Object	Variables	Source
1	Malaysia	Infrastructure	1) Good Governance, 2) positive legal frameworks 3) conducive economic policy 4) committed public and private sector 5) available market	(Ismail 2013)
2	Vietnam	Infrastructure	Public sector factor, private sector factor, procurement process, project information, external factor and risk management	(Tuan Hai et al., 2022)
3	Indonesia	Infrastructure	1) Comprehensive government ability 2) PPP institutional quality, 3) incentives for investors 4) law certainty and 5) opportunistic behaviour	(Maramis 2018)
4.	Perancis	Infrastructure	Government ability including (1) to identify high-value projects to be financed by PPP (2) ability to select service models (3) ability to agree on rewards (4) ability to work with detailed contracts (5) ability to invest in strengthening contracts	(Estache and Saussier 2014)
5.	Singapore	Infrastructure	Interrefere factors are 1) minimum government support, 2) funding availability, 3) construction lag time, 4) poor experience in PPP, (5) insecure government,	(Hwang, Zhao and Gay 2013)
6.	New Zealand	Highway	Transfer of demand risk, inefficiency in tendering process, firms capital structure	(Ryan and Menezes 2014)
7.	Hongkong	Infrastructure	Relationship management such as commitment and participation of high officer, defining objectives and target, integration inter organization	(Zou, et al. 2014)
			Acceptable level of user charge, cost effectiveness and financial attractiveness	(Ng, Wong and Wong 2012)

No	Country	PPP Object	Variables	Source
8.	Korea	Expressway	government and private strong commitment, risk sharing, and political and institutional climate support PPP	(Bae and Joo 2016)
9.	Australia and China	Infrastructure	(1) Robustness of business case expansion; (2) Quality of project brief; (3) Public sector competence; (4) governance structures; (5) effective communication; (6) balance between consolidation and competition; and (7) transparency level when tendering processes.	(Liu, Wang and Wilkinson 2016)

Source: Literature Review, 2021

As shown in table 1, it can be summarized that key success factors to PPP implementation are

1) Project bankability or financial aspect (Johnson, McCormally, & Moore, 2002; Forrer, Kee, & Zhang, 2002, Ryan and Menezess, 2014),
2) Economic & Technical Aspect (van Ham & Koppenjan, 2001) present from fair and transparent tendering (Ryan and Menezess, 2014), the private sector's ability to comply with the requirement (Tuan Hai et al., 2022; Liu, Wang, and Wilkinson 2016)
3) Law and Politics Aspect such as positive legal frameworks that support a climate of investment. It could be policies to simplify the investment process and incentives to attract investors (Ismail 2013, Tuan Hai et al., 2022; Maramis 2018; Estache and Saussier 2014; Hwang, Zhao and Gay 2013)
4) Social Issue including community around airport and passengers related to an acceptable level of user charges (Ng, Wong and Wong 2012)
5) Public-sector competence (government) particularly capability person in charge as PJPK and team. The executing agency must be advance PPP experience to promoted high commitment, identify high-value projects to be financed by PPP, ability to select service models etc (Estache and Saussier 2014; Zou, et al. 2014; Hwang, Zhao and Gay 2013; Liu, Wang and Wilkinson 2016).

3. METHODS

The research method uses a descriptive method that can be interpreted as a procedure that investigated by describing the current state of the subject/object based on the visible facts (Nawawi, 2003). The descriptive method used Document Analysis with the Content Analysis method. This method is used to reveal the situation of document writing through gathering information and comparing documents. The examination process will be based on 10 years PPP Book document to understand the differences in the preparation planning stages related to previous unsuccessful projects. The documents studied are the planning documents for the PPP Book include the 2010-2014 PPP Book, 2015 PPP Book, 2016 PPP Book 2017, PPP Book 2018, 2019 PPP Book, and 2020 PPP Book. This research also conducted a descriptive analysis through key stakeholder interviews including Airport Directorate DCGA Ministry of Transportation, Labuan Bajo Airport as a field operator, and the Directorate General of Financing and Risk Management Ministry of Finance. Methods for selecting key informant using snowball sampling.

Table 2. Key Informant

No.	Stakeholder	Subject
1	DCGA Ministry of Transportation	- Representation of Planning Section, DGCA - Representation of Airport Directorate, DGCA - Labuan Bajo Airport Management Unit, DGCA
2.	Ministry of Finance	- Representation of Directorate of Government Support Management &. Infrastructure Financing, Directorate General of Financing and Risk Management
		- Representation of Directorat of Loan & Grants, Directorate General of Financing and Risk Management

4. RESULT AND DISCUSSION

4.1 Review of Proposed Planning based on PPP Book

Based on the 2020-2024 National Medium-Term Development Plan (RPJMN), the direction of government financing policies is to encourage the use of funding sources from the public and the private sector through innovative financing schemes, including through the development of Public-Private Partnership (PPP) schemes as well as innovative forms of financing. To encourage Government and Business Entity Cooperation, Bappenas annually publishes a Public-Private Partnership (PPP) Book containing a list of planned activities to be financed through PPPs. The function of the PPP Book as a government planning document and to promote as well as monitor and evaluate the implementation of infrastructure provision implemented through the PPP scheme. The list of projects are expected to attract investors to participate in infrastructure financing in Indonesia. In the PPP Book, there are 2 categories of projects, namely projects in the process of preparation and ready to offer projects. All activities under the PPP scheme must be included in the PPP Book for further processing by the PPP stages, namely planning, preparation, and transaction. The description of the development process of public-private cooperation in the transportation sector in the last 10 years can be seen in the figure and Table 3. below. Based on figure 1, it can be described that road/highway development will be a favorable investment because bankable (profitable and high return). Comparable with the project in air transport, sea transport, and railway that relatively high cost, the limited capability of contractors, and long development period.

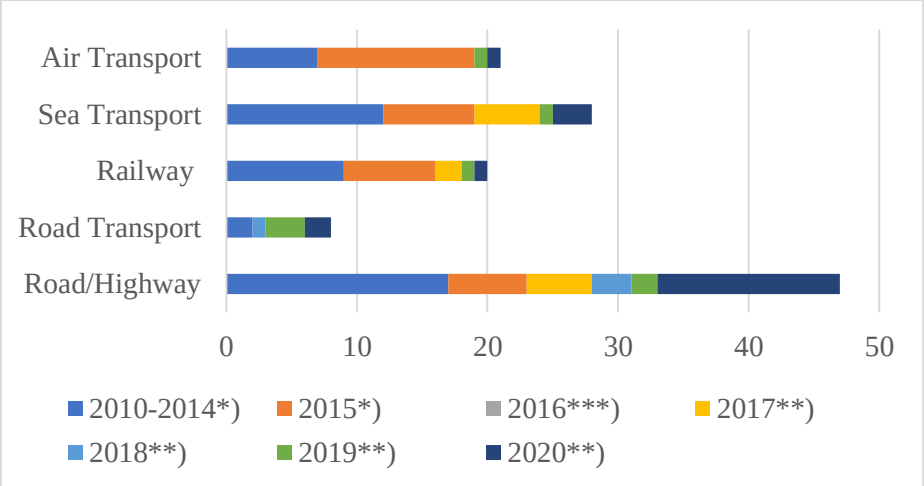

Figure 1. Progress Of Project Proposals In The PPP Book
Source: PPP Book, 2010-2020

Notes:
*) PPP Book 2010-2014 and PPP Book 2015 still refer to Presidential Decree 67 of 2005 and the criteria for Cooperation in the PPP Book (ready for offering projects, priority/prospective projects, and potential projects)
**) The 2016-2020 PPP Book is based on Presidential Regulation Number 38 of 2015, so the PPP criteria consist of ready to offer projects and under-preparation projects.
***) PPP Book 2016 compiled in 2015 was not recorded in the 2017 PPP Book Evaluation

However, after Presidential Decree 38/2015, the PPP application has not been directly implemented by DGCA. It because they tends to prioritize funding with conventional approach, which is considered more flexible and easy to refocus. Furthermore, this condition shows a lack of commitment from policymakers (Bae and Joo 2016; Ismail 2013). It makes most of the projects promoted in the PPP Book drop and shift to others that are considered more efficient and easy financing sources. Therefore, need full effort to support changing the paradigm from conventional to creative financing. Considering that there have been low successful PPP projects in the field of transportation, a pilot project has been prepared for each sector. The implementation of this pilot project certainly requires conditioning government support to be successful and can be an example of other PPP implementations. Therefore, the preparation of the Labuan Bajo Airport PPP will be immediately included in the 2019-2020 PPP Book with the status of being tendered. In more detail in the air transportation

sector, namely the Labuan Bajo Airport pilot project, the historical PPP project planning process is expected to describe the planning conditions, government funding priorities for the 2010-2020 period.

Table 3. Progress Of Air Transport Project Proposals in The PPP Book

No.	Air Transport Sector	2010-2014	2015	2017	2018	2019	2020	Description
A	**Potential Project**							
1	Development of South Banten Airport							Dropped from PPP Book, Airport Master Plan must be revised, not fulfilled readiness criteria
2	Development of Kertajati Airport							Dropped from PPP Book cause funded by National Bugdet and Regional Budget as National Strategic Project
3	Development of Dewadaru Airport– Karimun Jawa							Dropped from PPP Book cause funded by National Bugdet
4	Development of Singkawang Airport							Completion of PPP preparatory fund planning process. Listed on PPP Book 2020 (under preparation project)
5	Development of New Bali Airport							Penyelesaian proses perencanaan dan Persiapan KPBU
6	Expansion of Tjilik Riwut Airport							Dropped from PPP Book, government funded until 2019, 2020 managed by utilization cooperation by State Own Enterprise
7	Development of New Samarinda Airport							Dropped from PPP Book cause funded by National Bugdet and Regional Budget as National Strategic Project
8	Development of New Yogyakarta. International Airport, Kulonprogo							Dropped from PPP Book, Funded by Stated Own Enterprise
9	Development of Mutiara – Sis Al Jufri Palu Airport							Dropped from PPP Book, government funded 2019-2020, Loan ADB after Palu earthquake
10	Development of Radin Inten – Lampung Airport							Dropped from PPP Book, government funded until 2019, 2020 managed by utilization cooperation by State Own Enterprise
11	Development of Juwata – Tarakan Airport							Dropped from PPP Book, government funded until 2019, 2020 managed by utilization cooperation by State Own Enterprise
12	Development of Sentani – Jayapura Airport							Dropped from PPP Book, government funded until 2019, 2020 managed by utilization cooperation by State Own Enterprise
13	Development of Fatmawati-Bengkulu Airport							Dropped from PPP Book, government funded until 2019, 2020 managed by utilization cooperation by State Own Enterprise
14	Development of Hanandjoeddin Airport - Belitung							Dropped from PPP Book, government funded until 2019, 2020 managed by utilization cooperation (State Own Enterprise)
15	Development of Matahora-Wakatobi Airport							Drop from PPP Book cause funded by National Bugdet
16	Development of Sultan Baabulah Ternate Airport							Drop from PPP Book cause funded by National Bugdet
17	Development of Labuhan Bajo Komodo Airport							Ready for offering as PPP Project (2019)
B	**Ready for Offer**							
18	Terminal Expansion of Hang Nadim – Batam Internaational Airport							2019 ready to offer, 2020 already tendered

Source : PPP Book 2010-2022, analyzed 2022

Based on the data above, it can be described that most of the Ministry of Transportation's projects (road, sea, railway, air transport) are only categorized as potential projects (2010-2015) and projects in preparation (2017-2019). The majority of projects handled by MOT are not ready to offer because of low compliance with readiness criteria. Potential projects based on Presidential Decree 67 of 2005, must be completed with preliminary studies covering compliance with the National Medium-Term Development Plan (RPJMN), conformity with the regional spatial plan (RTRW), linkages between the developed sector and regional development, potential cost recovery, and preliminary studies. The investment climate in 2010-2015 is lower than current because in 2020-2024 policymakers have arranged policies to simplify the investment process and incentives to attract investors (UU Cipta Kerja). Furthermore, most executing agencies lack understanding of PPP projects so they promote the big projects with high risk and long returns. Inadequate capacity of executing agency affects the capacity to select a project, prepare a proposal and choose the best scheme. It makes executing agencies promote imprecise projects that are suitable with the PPP concept. One thing has to be concerned with preparing PPP projects in contrast with conventional funding-based projects. It takes more than 2 years to prepare the readiness criteria for PPP Projects and this needs huge effort either central government or local government while conventional funding only needs 1 year. In addition, because of lack of capacity, they preferred to choose the easiest way of funding which is conventional funding (APBN).

4.2 Labuan Bajo Airport Pilot Project Review

The Labuan Bajo Airport PPP project includes an airport expansion and operation project to meet the minimum standard requirements. The financing scheme chosen for the development of Labuan Bajo Airport is implemented through Utilization Cooperation with a Design - Built - Finance - Operate - Maintenance - Transfer scheme and a concession period of 25 years. In addition, the fund instrument uses the user charge method which takes earnings from the fraction of tariff admission. The purpose of this partnership is to improve performance and service to passengers, increase the number of passengers per year to 4,000,000 passengers and 3,500 tons of cargo by 2044, implement the 7th Nawacita and expand the national and international transportation sector (Directorate of Airports DGCA, 2020).

4.2.1 Government Support Form

As an effort to make the PPP pilot project a success and referring to the experience of previous PPP projects proposal, the state raised their support from both the Ministry of Transportation and other ministries and local governments. Given the position of the PPP project as a pilot project, it must be supported by various infestation climate policies that are able to facilitate the implementation of the PPP. Before studying further, the definition of government support and government guarantees based on regulations are as follows:

a) Government support is a financial contribution and or other forms provided by the Minister/Head of Institution/Head of Region and/or the Minister who administers government affairs in the field of finance and state assets in accordance with their respective authorities based on laws and regulations in order to improve the financial feasibility and effectiveness of PPPs. .

b) Government Guarantee is a financial compensation provided by the Minister who administers government affairs in the field of finance and state assets to the Implementing Business Entity through a cooperation risk-sharing scheme. Government guarantees are implemented through PT. Penjaminan & Infrastruktur (PT. PII).

Government support form will be vary started from policymaking, top-down policies, budget support, preparation document support, and permit support to streamline the process of airport development and PPP implementation. It shows comprehensive support from Public Sector to promote PPP Implementation in airports sector. Detail government support form can be seen as follow :

No.	Stakeholder	Support
1.	Central Government Support (Bappenas, Ministry of Finance, Coordinative Ministry of Maritime).	The central government support to build good investation climate policy that could attract investors are : - The determination as Komodo as one of 5 Super Priority Tourism Destinations by the President directed for Super Premium Destination to capture middle to upper economic markets; - Development of the Labuan Bajo Tourist Destination Complex (Ministry of Tourism, Ministry of Public Works, MOT, PT. ASDP); - Top-Down Policy including Budget determination for PPP Project Preparation (OBC, FBC) in National Development Plan and determination of Labuan Bajo Airport as a PPP Airport in a Joint Letter of Budget Allocation Ceiling for the 2019-2021 Top-Down Policy - Government Guarantee Support by PT PII
2	Ministry of Transportation Support (as Executing Agency)	- FBC OBC Document Setup Preparation of the PPP Node as executing agency to prepare Policy Formulation, Synchronization, Coordination and supervision and evaluation of PPP development in accordance with the mandate of Presidential Decree 38 of 2015 and Minister of National Development 4/2015 Budget Support (2020-2021); - Allocation for National Budget to improve project bankability including Land Acquisition for extension, Transitional Hill Cutting, Runway 17 Extension (300 m x 45 m), Terminal Interior Arrangement Work (MYC 2020-2021), and Garbarata Installation
3	Regional and Local Government Support (Pemda NTT, Pemkab West Manggarai)	- The Governor of NTT and the Regent of West Manggarai agreed to accelerate the land acquisition process _ Together with the Ministry of Transportation to form a Land Acceleration Team; - Relocation of roads affected by runway 17 extension in coordination with Ministry of Public Works - Grant of several parcels of land belonging to the Regional Government that are included in the runway extension area; - Support for the provision of supporting facilities for Super Priority Tourism Destinations

Source: Ministry of Transportation, 2020

4.2.2 Critical Success Factors and Barriers to PPP Projects

In order to examine more deeply the factors that differentiate the PPP planning process in the Air Transportation sector, the PPP proposal process will be studied based on the Factors Affecting the Success of Infrastructure PPPs including financial and commercial, technical, political and legal, social factors (Ozdganm & Birgonul, 2000; Ng et al., 2012, Bae & Joo, 2015). Descriptive analyse will be done based on qualitative approach (in depth interview) with key stakeholder.

Table 5. Descriptive Analysis

No	Factors	Factors Description	Descriptive Analysis
1.	Financial aspect (Johnson, McCormally, & Moore, 2002; Forrer, Kee, & Zhang, 2002; Ryan and Menezess, 2014),	Financial feasibility includes profitability, economic stability, and the ability to attract foreign capital. PPPs with long contract terms and large scale tend to have a high risk. Given the future conditions of uncertainty and uncontrollability that the private sector does not want to bear, the government often bears disproportionate risks (Johnson, McCormally, &	• The potential demand for passengers from Labuan Bajo Airport as market basic data of the DPSP Premium. The highest potential demand can drive the attraction of the PPP project offer to investors. The PPP project was also implemented in undeveloped airports that are already operational (brownfield) so that the cooperation offered is in the form of Asset Investment Cooperation (KSPI). The risk allocation structure through the user charge refund scheme is promoted by the Ministry of Finance. It is because PPP offered with the AP scheme is considered to be less risky and attract investors (high bankability). • Risk-sharing for location and political risk is handled by public sector (PJPK), while risk of design, construction, test operation, sponsorship risk, operation risk, and business risk handled by private

No	Factors	Factors Description	Descriptive Analysis
		Moore, 2002; Forrer, Kee, & Zhang, 2002)	(BUP). The risk of force majeure and ownership of assets are shared between PJPK and BUP. The government also carries out Government Guarantees through PT PII to overcome the problem of uncertainty risk in the future. • The COVID-19 pandemic has delayed the financial close process due to limited funding for the tender winner (the effect of the decline in revenues and profits of PT. CAF's main business)
2.	Economic & Technical Aspect (van Ham & Koppenjan, 2001; (Tuan Hai et al., 2022; Liu, Wang and Wilkinson 2016)	The private sector can contribute stable management possibilities, experience and capabilities and innovative technologies. Long-term projects and large-scale projects can eliminate market competition. Hence, a long-term monopoly only for selected private investors (van Ham & Koppenjan, 2001).	The Labuan Bajo PPP scheme with a concession period of 25 years, PPP bidder in the airport sector are scarce, besides that the private sector is unable to fulfill the passenger charge calculation of Rp. 60.000,-/passenger determined by the Ministry of Transportation. Only 1 private party that meets the qualifications (CAS and Changi consortium) with a modified user charge. The purpose of the PPP is also to open up opportunities for airport management actors so that they can increase the competitiveness of airport services and no monopoly in airport services. In addition, Indonesia government also support with UUCK to make investation process easier than before by integrating several laws.
3.	Positive legal frameworks (Ismail 2013, Tuan Hai et al., 2022; Maramis 2018; Estache and Saussier 2014; Hwang, Zhao and Gay 2013)	The stable climate investment present through stable and experienced government environment, a transparent and competitive tender system. This condition has supported by regulations and institutional frameworks that encourage PPP implementation	The existence of guarantee of legal certainty is implemented through PPP regulations that make it easier for the private sector (PP 38/2015, government guarantees) and directs the Minister to support PPP implementation through various top-down policies. In order to enhance the feasibility of the project, the government supports financing activities sourced from the APBN to gain the financial feasibility of the airport's state capital participation.
4.	Social Issue (Ng, Wong and Wong 2012)	Social acceptance for community lives around project construction and if the airport has operated, then community concerns about service quality enhancement	The community will not be particularly affected by shift financing. Labuan Bajo Airport remain managed by the DJU (UPBU Komodo – Labuan Bajo) so there has been no change in service prices. Based on the results of the auction, it is plausible to increase the service fee as improvement services. The passenger will concerned with service quality enhancement because this airport improves the level of international airports. The community around the airport accepted the expansion of Labuan Bajo Airport since this airport will be a gateway for tourism and promote their region. When tourism demands improve, it will alleviate the economic region and prosperous community.
5.	Public sector competence (Estache and Saussier 2014; Zou, et al. 2014; Hwang, Zhao and Gay 2013; Liu, Wang and Wilkinson 2016).	Regarding quality of technical factors (PPP Proposal), the quality of human resources (person in charges/PJPK) in government must be capable of planning, selecting projects, preparing PPP projects, and have experience in the PPP project preparation process.	The quality of the person in charge when proposing a PPP Project document is a crucial role. Initially, the majority executing agency do not fully understand about PPP Concept. PJPK's understanding of the PPP concept to minimize government budget and share risk must be developed. Most people do not study for a certificate PPP license in licensed PPP board but only learn by themself. Hence they could plan, select and prepare the imprecise project for PPP. PPP Project must be bankable to engage investors, with potential demand high and support by attractive economic region. In addition, because of less

No	Factors	Factors Description	Descriptive Analysis
			understanding of the person in charge and limited target time so most PPPs that have been proposed in PPP Book are dropped from the list. It shows that executing agency less commitment to promote PPP Policy.

Source: Data Analyze, 2021

5. CONCLUSIONS

Based on the description analysis, here is several important conclusions were obtained as follows: 1) PPP can be a financing solution through the arrangement of the private sector to join in the sharing of authority, responsibility, resources, risks, and benefits from the provision of public services and infrastructure (Hodge & Greve, 2007; Grimsey & Lewis, 2004). However, the scale of the project, the length of the concession period also limit the number of qualified investors who will participate in the PPP auction. Investors will also be more interested in bankable projects, there is legal certainty, guarantees, and government support so that investors can minimize uncertainty in the future. 2) Based on the historical study of the PPP Book 2010-2020, it is known that the PPP project proposal process in the 2010-2018 period was less supported by the government policy and experienced human resources who prepare PPP projects so the readiness criteria of PPP supporting documents (preliminary study, OBC, market sounding, FBC) could not be fulfilled in short term. This is also supported by urgent funding needs so that PPP financing is diverted to other financing schemes (APBN, BUMN) which are considered easier to propose. 3) By referring to experience and results of descriptive analysis, it can be seen that the factors that influence the success of PPP projects in the transportation sector in Indonesia are Government Competence (Human Resources/executing agency that can select financial feasibility of the project, technical capability and experience of PPP, and legal and political support by the government through the provision of regulations that facilitate the PPP process and government support. Most of the factors that play a role in this area at the PPP preparation/planning stage include the preparation of a comprehensive and reliable project (Preliminary Study, OBC, and FBC), land, government support, licensing to minimize uncertainty for the private sector/investor and attract investors and 4) Obstruct factors (threat) to the implementation of the Labuan Bajo PPP project are changes in the strategic environment such as a pandemic condition that makes the financial capacity of PT. CAF could delay the financial close process. However, it turns out that financial close delays have also occurred at others sectors such as PLTU Batang and KA Makassar – Pare-Pare due to land acquisition problems.

The constraint of this research because only takes 1 (one) case pilot project and does not correlate to other PPP Projects around the world. It should be more efficient and advantageous if the research discusses PPP in the transport sector as a whole. In addition, future research can categorize PPP funding schemes as examples for availability payment and user charges. Knowing the differences can benefit to find key success factors and the obstructing factor in PPP implementation. Moreover, this research only uses qualitative approaches with key stakeholder dialogue. Future research must be developed combining a qualitative approach with a quantitative approach to gain further and statistic-based information.

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Strategy For Handling Fishermen's Slums in Galesong, Takalar Regency Based on Community Participation

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Abstract

Slums as urban phenomenon is one of the problems faced in urban development Metropolitan MAMMINASATA reconditioned the process of urban development indirectly in the dynamics of developing slum areas in the District Galesong. This research aimed to investigate the typology of the development of slums and the sustainable handling strategy of the settlement. The research approach of the quantitative research used the descriptive and quantitative method and SWOT analysis. The research results indicted that the typology of the slums settlement in Galesong sub-district was the heavy typologi of the slums settlement, which was dominated by poor community and the minimum availability of the adequate infrastructure. Consequently, the community-participation-based handling strategy was needed to handle the slums settlement through the empowerment the participation in increasing the quality of slums settlement.

1. INTRODUCTION

The development of urban settlement areas, in general, is often problematic, in terms of the number of units built and indicated that it is not proportional to the population growth rate, including the quality of residential buildings which are considered not to meet livable quality standards, aesthetic requirements and fulfill adequate infrastructure (Salusu, 2015). The formal definition of urban areas in Indonesia is an area that has non-agricultural main activities with the composition of the function of the area as a place for urban settlements, centralization and distribution of government services, social services and economic activities (Law No.26 of 2007 concerning spatial planning). Symptoms of urban sprawl or urban sprawl have appeared on the surface, and it is feared that it can cause a decrease in environmental quality in the city and its suburbs (Ihsan, 2012). Urban Sprawl Pattern according to Oeslati et al., 2015; Dadi et al., 2016; Ewing et al., 2017 in Giyasih (2017), namely (1) concentric, (2) ribbon/linear/axial, and (3) development of a jump or chessboard.

According to Giyasih (2017), the physical indication of urban sprawl in agricultural areas is marked by the conversion of agricultural land to non-agriculture. Before indications of urban sprawl exist in an area, land use is dominated by vegetation cover. However, urban sprawl causes the dominant land use to change from vegetation cover to building coverage or built up area. Likewise with the urban sprawl of the coastal marine area, of course, it is indicated that there is a conversion of sea coastal land into settlements. Based on the criteria for slum settlements from the Minister of Public Works and Public Housing No. 2/PRT/M/2016 concerning improving the quality of slum housing and slum settlements, on 7 indicators of settlement infrastructure, namely: buildings, environmental roads, drinking water, environmental drainage, waste water management, waste management and fire protection.

The fishing community is part of the coastal community. Theoretically, coastal communities are defined as people who live and carry out socio-economic activities related to coastal and oceanic resources (Fisu & Marzaman, 2018). However, spatially coastal communities can be defined as people who live spatially in coastal areas without considering whether they have socio-economic activities related to the potential and condition of coastal and ocean resources (Fisu, 2016).

Takalar Regency is an area that has enormous potential for coastal resources, located along the west coast of the Makassar Strait to the southern coast of the Flores Sea and its capital is Patallassang. One of the coastal areas in Takalar Regency which has a lot of potential for coastal resources is Galesong District. One of the phenomena of slum settlements on the coast in Takalar Regency is in the Boddia Fisherman's Environment and the Bayowah Environment of Galesong District. The fishing village is located on the west coast of Takalar

district which is directly adjacent to Makassar Bay. The village is also adjacent to the Makassar City. The data shows that 81% of the people work in the fishery sector, such as fishermen, fish sellers, captains, and skipper/palele/ponggawa.

The coastal area management initiative, Galesong Selatan District, Takalar Regency requires a positive response from every main actor in each locality. The response in question is not only about readiness to accept this initiative, but also constitutional readiness at the local level, community readiness which is revealed in the form of joint action readiness, in this case readiness at the community or coastal community level in Galesong District, Takalar Regency. This challenge is increasingly real in coastal and marine areas, where integrated management is required to achieve a balance between meeting economic needs and protecting environmental quality, especially the surrounding fishing communities.

With the above background in mind, a sustainable development model known as sustainable development will emerge which contains three main elements which include economic, ecological and social dimensions (Harris et al, 2001 in Dahuri, 2003). A coastal area development, firstly it is considered economically sustainable (economic growth) if the area is able to produce goods and services in a sustainable manner; Second, it is considered ecologically sustainable when the base of the availability of natural resources can be maintained in a stable manner, there is no over-exploitation of renewable natural resources, there is no waste disposal that exceeds the assimilation capacity of the environment which can lead to polluted conditions, and the use of resources that cannot be utilized. renewed, coupled with the development of adequate substitute materials, and thirdly it is considered socially sustainable (social equity) if the basic needs of the entire population are met; there is a fair distribution of income and business opportunities.

Based on the description above, it is necessary to handle slum areas in anticipating various problems caused by the spread of slums in Takalar Regency, therefore the researchers took the research title 'Strategies for Handling Fishermen Slum Settlement' (Case Study: Fishermen Slum Settlement in Galesong District, Kabupaten Takalar).

2. LITERATURE REVIEW

2.1. Definition of Slums

Settlement is a place for human life not only regarding physical and technical aspects but also social, economic, cultural aspects and its inhabitants. It's not only about quantity but also quality. It does not only concern a place to live at home, but also a place to work, shop and relax (Alfian 2014).

Based on Law No. 1 of 2011 concerning housing and settlement areas, there are the following definitions:

1. A house is a building that functions as a suitable place to live, a means of fostering a family, a reflection of the dignity and worth of its occupants, as well as an asset for its owner.
2. Housing is a collection of houses as part of settlements, both urban and rural, which are equipped with infrastructure, facilities, and public utilities as a result of efforts to fulfill livable houses.
3. Settlements are part of a residential environment consisting of more than one housing unit that has infrastructure, facilities, public utilities, and has supporting activities for other functions in urban areas or rural areas.
4. Slums are settlements that are unfit for habitation due to irregularity of buildings, high levels of building density, and the quality of buildings and facilities and infrastructure that do not meet the requirements.

Slum settlements continue to arise influenced by several driving factors such as the increase in population which continues to increase every year resulting in the need for housing to increase. In addition, the flow of urbanization to cities resulted in more and more land needed to build houses. Urbanization occurs because of efforts to improve economic conditions in urban areas in the hope of being able to meet the needs of daily life. But in reality not all urbanization can bring benefits and advantages. Part of the failure of urbanization has actually created new problems in urban areas such as the emergence of slum settlements which are usually inhabited by low-income people (MBR). On average, MBR have a low level of education and their skills are also low.

2.2. Characteristics of Slums

According to Siswono Yudohusodo in his book Houses for all the People, suggests that slums are residential neighborhoods that have the following characteristics:

1. Environmental physical conditions that do not meet technical and health requirements, namely the lack or unavailability of infrastructure, facilities, environmental facilities. Even though they exist, they are in very poor condition and in addition, the layout of the buildings is disorganized;
2. The condition of the building is very bad and the building materials used are semi-permanent building materials;
3. The density of buildings with a KDB that is greater than the allowable, with a very high population density (more than 500 people per ha); and
4. Mixed and disorganized city functions.

The characteristics of slums according to Law No. 1 of 2011 concerning housing and settlement areas are:

1. Irregularity and high density of buildings;
2. Incomplete infrastructure, facilities and public utilities;
3. 3 Decrease in the quality of houses, housing and settlements, as well as infrastructure, facilities and public utilities; and
4. Construction of houses, housing and settlements that are not in accordance with the regional spatial plan.

The stage of identifying the characteristics of slum settlements by means of in-depth identification, this identification step is very important to do before the process of formulating directions in research (Fitria & Setiawan, 2014).

According to Nursyahbani and Pigawati (2015), the characteristics of the community in slum settlements are called the characteristics of the occupants. The characteristics of the occupants are the characteristics of the community that can be judged from the social and economic conditions. The characteristics of the occupants of the social conditions can be seen from the level of education and the type of work of the community. Where the level of education and type of work will affect the condition of the building and the environmental conditions inhabited. In addition to these two factors, population density and the number of residents can also affect the existing environmental conditions. As for the economic condition, it can be seen from the community in meeting their daily needs as well as the way in allocating funds to repair houses and the environment. In addition, according to Budi Prayitno (2014), the characteristics of people in slums can be seen from the level of income of the community and the level of community educators in slum settlements is low.

The characteristics of slum communities according to the Directorate General of Regional Development of the Ministry of Home Affairs are the dominance of slum residents with low income and education, and in slum settlements, the population works in the informal sector. Meanwhile, according to Sri Kumala (2014), the characteristics of slum communities can be seen from the economy of people with low incomes, people who work in the informal sector, and low levels of public education.

2.3. Society participation

Community participation is community involvement in the development of themselves, their lives, and their environment (Astuti, 2017). The notion of participation is always associated with the participation of a scientist named Keith Davis in Warjio & Sigalingging (2014), suggesting that participation can be defined as mental involvement or thoughts or morals or feelings in group situations that encourage them to contribute to the group in an effort to achieve goals. and take responsibility for the business concerned.

According to Gordon W. Allport in Warjio & Sigalingging (2014), states that a person who participates actually experiences his or her ego involvement which is more than just involvement in work or tasks. There are three important elements in participation, namely:

a. Participation is a mental and emotional involvement, more than merely physical involvement.
b. Availability contributes something to the effort to achieve group goals.
c. There is an element of responsibility.

The above definition implies that participation is a process of participation, involvement and togetherness of community members in making a decision. Community involvement, either directly or indirectly, can be considered as a form of community participation in participating.

Community participation has many forms, ranging from direct public participation in government programs and indirect ones such as donations of funds, energy, thoughts, and opinions or even rejection in government policy making. So far, community participation is still limited to participation in the implementation of government programs or activities, even though community participation is not only needed at the time of implementation, but starting from the planning stage to decision making (Rorong, et al., 2017).

According to Cohen and Uphoff in Astuti (2013), there are four types of participation, namely participation in decision making, participation in implementation, participation in utilization and participation in evaluation.

a. Participation in decision making.
   This participation is mainly concerned with determining alternatives with the community regarding ideas or ideas that concern common interests. The forms of participation in decision making include contributing ideas or thoughts, attending meetings, discussions and responding or rejecting the programs offered. Two approaches in the SPPN are top-down and bottom-up participatory development planning. The second type of approach intends to involve all stakeholders in development, to get aspirations and create a sense of belonging. This approach is implemented according to government levels through deliberation held at the national, provincial, district/city, sub-district, and village levels. At the village level, this deliberation is called the Village Development Planning Deliberation (Suroso, et al., 2014).
b. Participation in implementation.
   Participation in implementation includes mobilizing financial resources, administrative activities, coordination and program elaboration. Participation in implementation is a continuation of the plans that have been initiated previously, both related to planning, implementation and goals.
c. Participation in benefit-taking.
   Participation in taking benefits in terms of quality can be seen from the output, while in terms of quantity it can be seen from the percentage of program success.
d. Participation in evaluation.
   Participation in this evaluation is related to the implementation of the previously planned program. Participation in this evaluation aims to determine the achievement of the previously planned program.

2.4. Slums Handling

In handling slum settlements, it is necessary to know the needs of the area and the root of the problem, so that the right direction can be formulated. To be able to find out the right pattern of handling, first it is necessary to know how the slum level is based on several assessment criteria, so that the class of the slum settlement area can be known (Andini, 2013).

The general scheme for formulating concepts and strategies for improving the quality of slum settlements refers to Law No. 1 of 2011 and PUPR Ministerial Regulation No. 2/PRT/M/2016. According to Basri et al. (2010), the rejuvenation model is a model that can be used as a reference to improve settlements that are experiencing environmental degradation. Urban rejuvenation programs are usually intended to transform slum areas by filling and building infrastructure and facilities according to their land use so that they are suitable for residents to inhabit as well as to accommodate other activities and at the same time beautify the appearance (face) of the city (Hariyanto, 2010).

For slum settlements located on illegal land, the pattern of handling that must be done is resettlement. According to Johara T.J, in Basri et al. (2010), resettlement or resettlement is generally carried out through a transmigration program, namely the movement of people (migration) from an area that is generally densely populated on the island of Java to areas that are still sparsely populated usually outside Java with the aim of getting a better life. and is expected to increase national integration in the economy and social. Resetlement is still a pre-village, which is lower level than self-help villages, namely settlements of small and scattered residents, whose residents have not settled in a place called a village.

Resetlement or resettlement of residents in a specially provided area. Displacement of people usually takes time and has considerable social costs, including the possibility of growing riots or community unrest. This relocation is if the settlement is in a functional area that will/needs to be revitalized so as to provide economic value for the district/city government.

Based on the Guidelines for Implementing Settlement Infrastructure, Handling Settlement Areas (PUPR, 2015), the components and types of quality improvement activities consist of restoration and rejuvenation activities.

3. RESEARCH METHOD

3.1. Types of Research

The research was conducted by direct observation in the field and through interviews as well as accessing data at the relevant agencies. The research uses a descriptive quantitative and qualitative approach

with the aim of describing the data collected systematically. This research was conducted by conducting interviews with people living in slums using questionnaires and direct observation of the existing infrastructure at the research site (Sugiyono, 2015).

3.2. Research Time and Location

The research time was carried out for 3 months, namely from August to October 2021. The research location was carried out in fishermen's slum settlements in Galesong District, Takalar Regency. In Galesong District, there are two location spots, namely the Boddia Environment and the Bayowah Environment, which are located in the Boddia Village/Sub-district and Galesong City, respectively.

3.3. Population and Sample

Based on the Decree of the Takalar Regent regarding the determination of the slum area of Takalar Regency, the slum area of Takalar Regency consists of ten neighborhoods which administratively are spread over seven sub-districts including Pattalasang District, South Galesong District, Galesong District, Galesong District. Therefore, the researchers determined the research population, namely 2 slum locations, namely: Kelurahan Boddia (Boddia Fishermen's Neighborhood) and Kelurahan Galesong Kota (Bayoah Neighborhood) with a total number of households in the slum settlements of the 2 wards is 939 families.

Researchers determined 2 residential neighborhoods that were categorized as slums in Galesong District, Takalar Regency. In determining the number of samples in this study, using the Taro Yamane formula as follows:

$$n = \frac{N}{N(d)^2 + 1}$$

Where:
n = number of samples
N = total population
d = standard error used (0,1), with the expected error rate in the study is 10, then:

$$n = \frac{939}{939(0,1)^2 + 1}$$
$$n = \frac{939}{939(0,01)^2 + 1}$$
$$n = \frac{939}{10,29}$$
n = 91,2
n = 91 KK.

3.4. Data Analysis Technique

To analyze the management of slums, this study uses qualitative and quantitative descriptive analysis methods. For more details, the analysis method in this research data is as follows:

To answer the formulation of the first problem, namely how the characteristics and typology of slum settlements in Galesong District, Takalar Regency, used descriptive qualitative and quantitative analysis by observing the existing infrastructure in slum settlements. Observations were made by comparing appropriate technical standards based on the criteria for slum settlements from the PUPR Ministerial Regulation No. 2/PRT/M/2016 concerning improving the quality of slum housing and slum settlements, against 7 indicators of settlement infrastructure, namely: buildings, environmental roads, drinking water, drainage. environment, waste water management, waste management and fire protection.

To answer the second problem formulation, namely How to deal with fishermen's slum settlements in Galesong District, descriptive quantitative methods are used, assisted by a SWOT analysis tool. Methods for formulating strategies for handling slum areas of fishermen Galesong Kab. Takalar refers to the stages of strategy formulation techniques developed (David, 2009). The stages of strategy formulation as a framework are the input stage (the input stage), the matching stage (the matching stage) and the decision stage (the decision stage). For the input stage, an external factor evaluation matrix (EFE) and an internal factor evaluation matrix (IFE) are used. The EFE and IFE matrices are processed using several analytical steps. Identification of External and Internal factors, the first step taken is to collect information and identify external (opportunities

and threats) and internal (strengths and weaknesses) factors related to the management of the Range Market by conducting interviews using questionnaires to experts. The results of the identification and analysis of the two factors above become external and internal determinants which are then given weights and ratings.

Determination of weights and ratings using a questionnaire by submitting the results of the identification of external and internal factors to the expert. The results obtained are knowing the strategic position and corporate strategy (Grand Strategy) of the development of residential areas. After the input stage, the matching stage is continued which is focused on generating feasible alternative strategies by combining external and internal factors resulting from the input stage (EFE and IFE matrices).

The analytical tool in this stage is the SWOT (Strengths - Weaknesses -Opportunities - Threats) matrix. This matrix combines the opportunities and threats faced according to their strengths and weaknesses to produce four alternative strategies, namely SO strategy, WO strategy, WT strategy and ST strategy. Next, the decision stage is the stage to determine which alternative strategies are feasible and best, using the Quantitative Strategies Planning Matrix (QSPM) analysis tool or the Quantitative Strategic Planning Matrix. QSPM uses the results of the analysis of the input stage and the matching stage. SWOT analysis using matrix analysis method. The results of this analysis will give birth to various strategies in handling the fishermen slum areas of Galesong Kab. Takalar. The residential area development strategy is formulated according to the variables studied, namely; Housing conditions, environmental roads, sanitation, and socio-economics. The strategy formulated is expected to be able to handle the Galeson fishermen's slum areas based on community participation.

This analysis is intended to identify internal and external factors which include: (1) Strengths are internal factors as a driving force to achieve the goal of developing coastal areas with a sustainable coastal resource management approach. (2) Weaknesses are identifying internal factors that will affect the achievement of the objectives of developing coastal areas with a sustainable coastal resource management approach. (3) Opportunities are external factors that support to achieve coastal area development with a sustainable coastal resource management approach. (4) Threats are identifying external factors that will affect the achievement of the objectives of developing coastal areas with a sustainable coastal resource management approach.

4. RESULT AND DISCUSSION

4.1 Result

Takalar Regency is one of the regencies in South Sulawesi Province which is located in the southern part. The astronomical location of Takalar Regency is at a position of 50 3' - 50 38' South Latitude and 1190 22' - 1190 39' East Longitude, with an area of approximately 566.51 Km2. The distribution of urban slums in Takalar Regency can be seen in Table 1. The condition of the existing buildings in the slums in the research location, seen from the arrangement of buildings, the level of density and the quality of the buildings.

Table 1. Distribution of Slums in Takalar Regency

No	District	Village	Slum Location Name
1	South Galesong	Bontokassi	Bontokassi Environment
2	Galesong	Boddia	Boddia Fisherman Environment
3	Galesong	Galesong Kota	Bayowah Environment
4	North Bolombangkeng	Palleko	Palleko 2 Environment
5	North Bolombangkeng	Bontolebang	Kampung Parrang Environment
6	Pattallassang	Pappa	Pappa 1, 2 Environment
7	Pattallassang	Pattalasang	Palemba Pattalasang Environment
8	Pattallassang	Palantikang	Palantikang Environment
9	Sandrobone	Sandrobone	Bontowa Environment
10	Mangarabombang	Mangadu	Tamalate Environment

Source: Slum Profile of Takalar Regency, 2017.

The analysis refers to the Minister of Public Works and Public Housing No.2/PRT/M/2016 on improving the quality of slum housing and slum settlements. Based on Table 2 shows the value of public perception related to the condition of IMB ownership which shows 52 respondents have IMB and 39 do not have it, so that the distribution value of parameter 130 shows a moderate value.

Table 2. Respondents' Perceptions Regarding Building Density Conditions

No	Ownership IMB	Slum Settlement District. Galesong		Mark	
		N	%	Parameter	Mark
1	Yes	52	57,14	1	52,00
2	Not	39	42,86	2	78,00
	Amount	91	100,00	3	130,00

Source: Primary Data Management Results

Incompatibility with buildings with technical requirements is reviewed based on the comfort of the community in living in the research location by looking at the condition of the building based on the PUPR Ministerial Decree No. 2/PRT/M/2016 concerning improving the quality of slum housing and slum settlements (Table 3). Table 3 shows the community's perception value regarding the comfort of the building at the research location which shows 29 respondents feel comfortable and 62 are not comfortable so that the distribution value of the parameter 153 shows a bad value. This condition is caused by the dominant semi-permanent housing condition with the building area not proportional to the number of people who occupy it and the building does not meet health standards (unfit for habitation).

Table 3. Respondents' perception of building comfort

No	Building Convenience	Slum Settlement District. Galesong		Mark	
		N	%	Parameter	Mark
1	Yes	29	31,87	1	29,00
2	Not	62	68,13	2	124,00
	Amount	91	100,00	3	153,00

Source: Primary Data Management Results

The Galesong Slum Settlement Area is a slum area located in the Boddia fishing environment and the Bayowah neighborhood in Galesong City Village with an area of 34.92 hectares of delineation. Based on the characteristics, the Galesong slum area is a coastal slum area. The population in the Galesong slum area is 936 people divided into 187 families. The Assessment Formula in Determining the Priority Scale for Handling Urban Slums in Takalar Regency in Galesong Slums Area can be seen in Table 4.

Table 4. Assessment Formula in Determining Priority Scale for Handling Urban Slums in Takalar Regency in Galesong Slums Area

Mark	**Information**	**Various Classification Possibilities**																	
		A 1	A 2	A 3	A 4	A 5	A 6	B 1	B 2	B 3	B 4	B 5	B 6	C 1	C 2	C 3	C 4	C 5	C 6
Slum Level (Total Grade A)																			
71 – 95	Heavy Slum	**x**	**x**	**x**	**x**	**x**	**x**												
45- 70	Moderate Slum							**x**	**x**	**x**	**x**	**x**	**x**						
19 – 44	Light Slum													**x**	**x**	**x**	**x**	**x**	**X**

Mark	Information	Various Classification Possibilities																	
		A 1	A 2	A 3	A 4	A 5	A 6	B 1	B 2	B 3	B 4	B 5	B 6	C 1	C 2	C 3	C 4	C 5	C 6
Other Considerations (Total B Score)																			
7 – 9	Other Considerations High	**x**	**x**					**x**	**x**					**x**	**x**				
4 – 6	Other Considerations Moderate			**x**	**x**					**x**	**x**					**x**	**x**		
1- 3	Other Considerations Low					**x**	**x**					**x**	**x**					**x**	**X**
Land Legality (Total Grade C)																			
(+)	Legal Land Status	**x**		**x**		**x**		**x**		**x**		**x**		**x**		**x**		**x**	
(-)	Land Status Illegal		**x**		**x**		**x**		**x**		**x**		**x**		**x**		**x**		**x**
Handling Priority Scale		**1**	**1**	**4**	**4**	**7**	**7**	**2**	**2**	**5**	**5**	**8**	**8**	**3**	**3**	**6**	**6**	**9**	**9**

Source: PUPR Ministerial Decree No. 2/ PRT/M/2016

Analysis of location assessment based on criteria, indicators and parameters of slums in the Galesong Slum Area, then the level of slums, Other Considerations and Land Legality of the Galesong Area based on the criteria, indicators and parameters of slums in the Galesong Slum Settlement Area, the level of slums, other considerations and the legality of land in the Galesong area, namely: a) Slum level: Severe Slum (Total Score 85); b) Other Considerations: High (Total Score 11); c) Land Legality: Illegal.

The process of developing fishermen's slum settlements in Galesong is conditioned by: the infrastructure service system has not run optimally, low awareness of environmental cleanliness, unstructured housing conditions, community participation in maintaining the residential environment is not optimal, and is inhabited by the dominant low-income community. In line with Soemadi's thinking (Tasrif Landoala, 2013) states that slums are part of a dirty city, buildings that do not meet health and health requirements and are inhabited by poor people with garbage disposal facilities, as well as clean water facilities that do not meet health requirements. This means that the Galesong slum settlement is a typology of slum settlements in coastal areas and is dominated by the poor and has not been served with basic facilities and infrastructure in accordance with minimum service standards.

The strategy for dealing with Galesong slums is measured based on a swot analysis. This swot matrix is used to formulate alternative strategies in handling slum areas by combining internal and external factors, which can be seen in the following table:

Table 5. Matrix of Potentials, Problems, Challenges, and Barriers

Potency	• Close to the fishing industry kawasan • Close to the port functional area • Close to tourist areas • Has potential for tourism sector development

Problem	• Unpatterned drainage channels • Some areas do not have drainage channels • Waste facilities are not served yet • People throw garbage directly into the sea • Don't have MCK yet • Communities dispose of solid waste (feces) directly into the sea • Environmental degradation of coastal areas and environmental pollution • Do not have fire protection facilities • Dominant communities occupy illegal land • Lack of public awareness in keeping the environment clean • Changing community behavior in conserving coastal areas • Lack of public awareness in maintaining settlement infrastructure
Opportunity	• Enables the implementation of balanced urban area development through environmental sustainability • Development of urban settlements is oriented towards sustainable management of coastal areas • Development of new settlements and urban infrastructure integrated with environmental management systems
Obstacle	• Implementation of development policies that have not been running effectively conditions the weak control over the use of space so that it has an impact on the development of slum areas that occupy coastal borders. • The handling of slum areas in the Galesong area will have a fairly high social risk because the dominant settlements occupy illegal land (squatters). • Weak support for waste water management can be seen from the funding aspect from district, provincial and central governments for the wastewater sub-sector • At a macro level, the institutional management of the waste sub-sector is still low • The limited ability to fund the Takalar Regency APBD has resulted in the budget allocated for waste management being limited so that the budgeting adheres to a priority system • On a macro level, Takalar Regency does not yet have a Drainage Master Plan • On a macro basis, budget constraints for the drainage sub-sector are a result of the difficulty in proposing activities in the development and management of environmental drainage

Source: Primary Data Management Results

The variables used to be able to assess the characteristics of individuals, objects, symptoms, which can be measured quantitatively or qualitatively in this study are divided into two, namely the dependent variable related to the existing and basic physical conditions of the Coastal Area, Kec. Galesong Kab. Takalar and the Independent Variable (X), namely:

Table 6. Independent Variable (X)

No	Variable	Indicator
1	Social Aspect	▪ Labor absorption ▪ Availability of service access ▪ Employment gaps
2	Economic Aspect	▪ Increasing people's income, ▪ Business opportunities ▪ Informal sector ▪ Income gap ▪ PDRB from sectors: transportation and communication, finance, services, agriculture, industry, electricity, gas and water, construction and trade.
3	Environmental Aspects	▪ Environmental conservation. ▪ Environmental pollution. ▪ Safety and comfort

Table 7. Dependent Variable (Y)

No	Variabel	Indikator
1	Basic Physical Aspect	▪ Demographics of the population ▪ Availability of service access ▪ Employment gaps
2	Environmental Facilities and Infrastructure	▪ Road Conditions / Accessibility ▪ Drinking Water ▪ Drainage ▪ Garbage ▪ Waste Management ▪ Fire Protection
3	Building Condition	▪ Density Level ▪ Type of building ▪ Building Order ▪ Building Feasibility

4.2 Discussion

This study shows that the development process of fishermen's slum settlements in Galesong is conditioned due to: the infrastructure service system has not run optimally, low awareness of environmental cleanliness, unstructured housing conditions, community participation in maintaining the residential environment is not optimal, and is inhabited by the dominant MBR community. In line with Soemadi's thinking, slums are part of a dirty city, buildings that do not meet health and health requirements and are inhabited by poor people with garbage disposal facilities, as well as clean water facilities that do not meet health requirements (Pawitro, 2015). This means that the Galesong slum settlement is a typology of slum settlements in coastal areas and is dominated by the poor and has not been served with basic facilities and infrastructure in accordance with minimum service standards.

The strategy for handling Galesong slum settlements based on community participation is measured based on swot analysis. Based on the results of the strategy analysis using SWOT analysis, several coping strategies were born based on community empowerment. The strategy is carried out through: development of the potential of urban areas based on environmental sustainability, development of urban settlement areas followed by sustainable management of coastal areas, development of urban settlements and infrastructure that are integrated with environmental management systems, development of urban areas followed by controlling the use of productive lands. structuring and managing coastal areas in a sustainable manner, developing new settlements followed by structuring coastal areas, optimizing government supervision and control on violations of settlement area development along the coastal border, implementing regulations related to standards for residential area development, encouraging public awareness of the cleanliness of the community's environment, and increasing economic conditions of the community through strengthening the productive business system of fishing communities. In line with the idea (Noegroho, 2012), that community participation is important in development activities so that the results are more focused and optimally beneficial for residents.

The strategy for handling the Galesong fishing slum area based on community participation is carried out by: developing the potential of urban areas based on environmental sustainability, developing urban settlement areas followed by sustainable management of coastal areas, building settlements and urban infrastructure that is integrated with the environmental management system for regional development. urban areas followed by controlling the use of productive lands, structuring and managing coastal areas in a sustainable manner, developing new settlements followed by structuring coastal areas, optimizing government supervision and control over violations of residential area development along coastal borders, implementing regulations related to residential area development standards encouraging public awareness of the cleanliness of the community's environment, as well as improving the economic condition of the community through system strengthening productive business of fishing communities.

5. CONCLUSIONS AND SUGGESTIONS

The typology of slum areas based on location characteristics shows the typology of slums in coastal areas and is a heavy slum which is dominated by the poor and has not been served by basic facilities and infrastructure in accordance with minimum service standards. As a research recommendation, for the government, dealing with slum areas requires a comprehensive and sustainable management concept. Socialization to the community related to healthy living behavior patterns and environmental conservation as well as community empowerment is needed in handling slum settlements. Tighter regulation and supervision from the government is needed on the development of slum areas. In future research, it is necessary to conduct a more in-depth study on preventing the development of slum areas so that they no longer develop more widely.

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Application of The PPP Scheme on The Tourism-Transportation Case Study: The Concept of Palopo City Tourism

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Abstract

The stipulation of the Palopo City Regional Tourism Development Master Plan 2021 – 2025 makes the Palopo City tourism sector quite optimistic after the beginning of the pandemic. Until 2030, Palopo City targets 250,000 domestic tourists and 1800 foreign tourists. The tourism potential of Palopo City, especially in urban areas is quite promising with the construction of a culinary center and souvenirs, public space activities, and the development of culinary businesses. These potentials must be supported by adequate facilities and infrastructure, including accessibility. Meanwhile, public transportation in Palopo City is considered inadequate and not integrated with each other. The concept of Palopo City Tourism offers the integration of tourism activities in the urban areas of the city of Palopo by providing integrated tourism transportation modes, equipped with supporting infrastructure such as bus stops. However, the implementation of the concept will be constrained by funding problems given the limited regional finances and the demand to prioritize sectors that are more strategic than tourism. This paper will see how the implementation of the PPP scheme in the tourism sector, especially in the transportation aspect, namely in the concept of Palopo City Tourism, both in development, operation and potential benefits. From the results of the analysis of movement patterns and the location of tourist objects, 3 optimal routes were chosen that could accommodate the movement of tourists, namely the southern route, western route and northern route. From the results of the analysis of infrastructure needs, it is necessary to develop infrastructure in the form of shelters and pedestrian paths and their accessories at tourist attraction points and several commercial areas. In addition, several PPP financing schemes are also proposed which are considered suitable for the City Tour Palopo concept, including Concessions and Affermage/Lease schemes, such as Service Contracts and Management Contracts, Design-Build-Finance-Operate/Maintain (DBFO, DBFM or DBFO). /M), Build-Own-Lease-Transfer (BOLT).

Keywords

City Tourism; Tourism Transportation; Palopo; PPP;

1. BACKGROUND

Tourism has a broad multiplier effect, so that it can increase regional income through user fees and can also increase people's per capita income **(Pascariu & Ibănescu, 2018)**. This is due to the increasing expansion of economic activities by tourists not only in tourism locations, but also economic activities outside of tourism **(Shuifa et al, 2011)**. The great potential of the tourism industry is in line with the need for relatively large development costs in each region, is not supported by the availability of sufficient funds. The General Allocation Fund (DAU) as a source of APBD is generally not sufficient to meet regional management needs **(Mardiasmo, 2002)**. Therefore, regional governments need to collaborate with the private sector regarding financing. Tourism on the one hand is strongly influenced by government regulations or policies, but on the other hand it is driven by private interests **(Novolodska et al, 2018)**.

In its function as a promoting factor and serving factor, the transportation sector has played an important role as the lifeblood of the economy **(Sharif, et al 2020)**. The development of the transportation sector is intended to mobilize various regional potentials in this case the tourism sector.

With the availability of services for transportation, it can increase tourism development and increase the number of tourists because access to urban areas becomes smoother and the costs incurred are getting cheaper **(Kolupaev et al, 2018)**. Transport and travel can be discussed without considering tourism, but tourism cannot develop without travel and other aspects of transportation **(Mishra et al, 2020)**. For this reason, the transportation aspect in the tourism sector is a vital aspect in the sustainability of tourism activities in a region.

Public Private Partnership is a collaboration between a public institution and a private company formed because of several synergistic benefits and is carried out by sharing profits and risks **(Novolodska et al, 2018)**. Most public-private partnerships can be found in the development, financing, implementation, and management of infrastructure **(Muhm, 1998)**. Public Private Partnership (PPP) is an arrangement between the government and private entities in the provision of infrastructure services and is one way to obtain additional funding sources for infrastructure investment **(Djabbari et al 2021)**. Through government-private cooperation, expertise and assets from the government and the private sector cooperate in providing services to the community and carry out cooperation where the potential risks and benefits in providing services or facilities are shared between the government and the private sector or private organizations that are invited to cooperate.

The stipulation of the Palopo City Regional Tourism Development Master Plan 2021 – 2025 makes the Palopo City tourism sector quite optimistic after the initial era of the pandemic. Until 2030, Palopo City targets 250,000 domestic tourists and 1800 foreign tourists **(Ripparda Palopo City, 2021)**. The tourism potential of Palopo City, especially in urban areas is quite promising with the construction of a culinary center and souvenirs, public space activities, and the development of culinary businesses. Of course, these potentials must be supported by adequate infrastructure, facilities and infrastructure, including accessibility. Meanwhile, public transportation in Palopo City is considered inadequate and not integrated with each other. The concept of Palopo City Tourism offers the integration of tourism activities in the urban area of Palopo city by providing integrated tourism transportation modes, equipped with supporting infrastructure such as bus stops. This paper will look at how the implementation of the PPP scheme in the tourism sector, especially in the transportation aspect, in which within the concept of Palopo City Tourism.

2. LITERATURE REVIEW

2.1 City Tourism

According to the UNWTO (World Tourism Organization), City Tourism refers to Urban Tourism, where urban tourism is the journey taken by tourists to cities or places with high population density. The duration of these trips is usually short (one to three days) therefore it can be said that Urban Tourism is closely related to the short-term tourism market **(UNWTO, 2002)**. Tourists come to big cities because of the desire to feel and see the diversity that exists in the city. In this case, a city is a melting pot of national culture, art, music, literature and of course grand architecture and urban design. It is the concentration, variety and quality of urban tourism activities and attributes that create their appeal and place cities on the tourism map **(UNWTO, 2012)**.

The development of city tourism is driven by spatial, social, economic and technological strengths. The process of urbanization causes a rapid increase in the number of people living in urban areas and also living an urban lifestyle, and increasing the movement of tourism travel **(ETOA, 2014)**. The growth of city tourism occurs in both developed and developing countries. In 2014, the market share of city tourism was 21% in Europe, 17% in North America, 25% in Asia-Pacific and 22% in Latin America **(GPA International, 2016)**.

The economic and socio-spatial implications of city tourism are significant. At the global, national, regional and local levels, city tourism has become an important economic driver. Nationally, city tourism outperforms other tourism sectors with GDP growth **(Roland Berger, 2012)**. Regionally and locally, city tourism is considered an incubator of innovation and technology **(Terzibasoglu, 2016)** and one of the key factors in the urban economy and urban development. City tourism creates jobs, stimulates foreign exchange through income and taxes, and encourages investment in infrastructure and the provision of public services **(UNWTO, 2012)**. In other studies it is said that city tourism can increase public awareness of cultural heritage buildings and become tolerant and

respectful of each other **(Brooks, 2016)**. A study involving 2600 respondents in Copenhagen, Berlin, Munich, Amsterdam, Barcelona and Lisbon revealed that urban people value a positive atmosphere, life and tourism activity in their cities and protect cultural heritage buildings that are part of their city's history **(Koens and Postma, 2017)**.

2.2 PPP

The International City/County Management Association **(ICMA, 2017)** states that in addition to traditional infrastructure funding through APBN/D, there are several other alternatives for infrastructure financing, namely: (1) new funding sources; (2) new financing mechanisms; or (3) a new funding pattern. New sources of funding could be additional sources of income to finance infrastructure projects. Meanwhile, a new financing mechanism could take the form of a new flexible and/or potentially cost-effective loan method to finance an infrastructure project. Finally, new financing patterns may involve new partners (private, non-profit organizations, or communities) to participate in infrastructure financing and project implementation.

The involvement of the private sector in infrastructure financing is carried out through the PPP scheme, among others. In Presidential Regulation Number 38 of 2015, PPP is defined as cooperation between the government and business entities in the provision of infrastructure for the public interest by referring to the specifications previously determined by the Minister/Head of Institution/Head of Region/State-Owned Enterprises/Regional Owned Enterprises, which partly or wholly uses the resources of the Business Entity with due observance of the risk sharing among the parties. PPPs can bridge the fulfillment of some of the infrastructure funding needs through the participation of the private sector. This collaborative model allows the transfer of responsibility for the financing, design and construction of an infrastructure project, as well as responsibility for the operation and maintenance of infrastructure to the private sector. In several developing countries such as India, Mexico and Brazil, this PPP model has made a very significant contribution in meeting infrastructure funding needs, reaching around 25-30% of their total funding needs. There are several reasons why many countries make the PPP scheme an important scheme in infrastructure provision.

Cheung et al. (2009) mentioned the reasons for using the PPP scheme in the UK are more related to financial elements such as a shortage of Government spending, economic pressures that require more infrastructure, and a reduction in restrictions on public investment. Meanwhile, in Hong Kong and Australia, the reasons for improving the overall performance of public projects are more. More specifically Walker et al. states that there are at least 3 (three) reasons for implementing the PPP scheme. First, the private sector has better mobility than the government. Second, the private sector is able to provide better public services and is able to build a balanced partnership so that it can better manage the risk-return structure. Third, the government is considered incapable of raising massive funding for large-scale infrastructure projects **(Cheung et al., 2009)**.

The increasing role of the private sector in providing infrastructure is in line with the direction of infrastructure development in the 2015-2019 National Medium-Term Development Plan (RPJMN), namely in the context of: (1) strengthening national connectivity to achieve balanced development; (2) accelerate the provision of basic infrastructure (housing, clean water, sanitation, and electricity); (3) guarantee water, food and energy security to support national security; and (4) developing urban mass transportation, all of which are implemented in an integrated manner and by increasing the role of government and private sector cooperation (hereinafter referred to as Business Entities).

However, the PPP scheme also contains several limitations. According to UNESCAP, these limitations include: (1) not all infrastructure projects can be implemented under a PPP scheme, depending on political, legal, commercial feasibility, and others; (2) the possibility that the private sector is not interested because of the high implementation risk or lack of capacity in project implementation; (3) PPP projects may be relatively more expensive unless additional costs can be offset by efficiency advantages; (4) requires adequate sector and market reforms; and (5) often the success of a PPP depends on the efficiency of the regulations.

Given that the PPP project will be offered to the private sector, the financial feasibility of the project is a matter of great concern to the Government. If a PPP project is not financially viable but economically viable, the Government can provide various supports so that the project can be

financially viable. This Government support is very important to attract the interest of the private sector in financing the provision of infrastructure **(UNESCAP, 2009)**.

2.3 RIPPARDA Overview

The Palopo City RIPPARDA document has accommodated the transportation aspect, which is intended to support the development of tourism to provide easy access, convenience, and security for the movement of tourists to destinations and the movement of tourists within the DPD. **The concept of City Tourism** is not explicitly mentioned in the RIPPARDA document, but in principle it is very much in line with the goals and principles contained in the document. The RIPPARDA document only stipulates the location and tourism destinations in Palopo City and its development strategy but **does not mention how the financing scheme and funding** for tourism infrastructure development and its supporting facilities are.

3. METHODS

The method used in the preparation of this paper is a qualitative descriptive method which can be interpreted as a problem-solving procedure investigated by describing the current state of the subject/object based on visible facts **(Nawawi, 2003)**. The descriptive method used is a discussion of existing conditions, potentials and challenges, proposed concepts and ideas, and financing schemes. The flow chart for writing this paper can be seen in the image below:

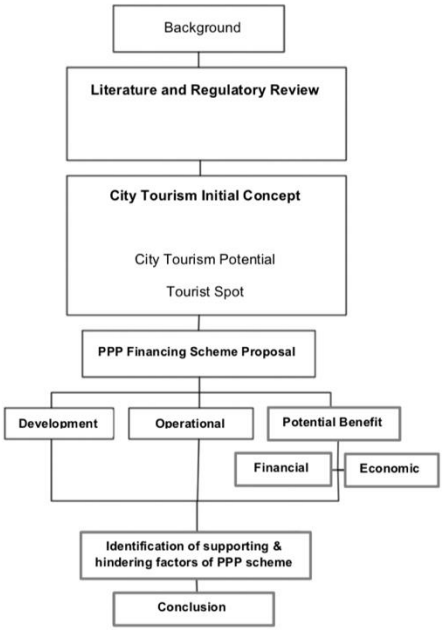

Figure 1. Writing flowchart

4. DISCUSSION

4.1 Palopo City Community and Tourist Activity Patterns

In theory, community activities will greatly affect the orientation or pattern of population movement. Activities are characterized by land use characteristics or spatial patterns. These land use characteristics will then form a spatial structure with activity centers carrying out certain service functions. The hierarchy of activity centers will form growth centers as areas of attraction and service areas can be interpreted as hinterlands or generating areas. Therefore, the factors of land use, population distribution, availability of infrastructure, and other facilities found in the center of activity and the urban/ rural hierarchy greatly affect the pattern of population movement.

The pattern of transportation activity in Palopo City is determined by the mobilization of goods and passengers driven by the development of economic areas, tourism, production, and services both internally and externally from and to the Palopo City area. In addition, it is also based on the movement of the community which then forms a spatial structure by developing a system of urban

settlement centers (urban system) for the main functions of urban services, the relationship between urban settlement centers and the orientation of the movement of goods and passengers.

The development of transportation activity patterns also cannot be separated from the growth centers of the Palopo City area, namely the most developed activity centers in Palopo City, including Kec. Wara, District. East Wara and North Wara. The regional growth center is divided into the Regional Activity Center (PKW) in the Wara Urban Area as the center of government; Local Activity Centers in each sub-district capital in Palopo City.

In simple terms, the orientation of the movement of goods and passengers in Palopo City occurs from activity centers with a lower hierarchy to a higher hierarchy of activity centers. Movements occur between growth centers which in turn result in the distribution of movement, both population and goods. The linkages between these areas are connected by the existing road network system and are supported by the development of future road networks. For the orientation of the movement of tourists, most of them lead to areas with urban characteristics in Palopo City.

The condition of the movement of people in this discussion includes the number of generation and attraction as well as the distribution of movement in the Palopo City area. The pattern of movement of people in Palopo City obtained in the field, either through direct observation or from public information about the potential for movements that occur internally and externally. Internal movements include movements between sub-districts within the Palopo City area. The potential for movement between sub-districts is basically influenced by various activities and needs, especially socio-economic activities. The existence of facilities in each sub-district is a factor that has the potential for movement, both movements that occur within the sub-district itself, and movements that occur between sub-districts. The amount of movement that takes place locally (within the sub-district area) is largely determined by the type and number of existing environmental facilities.

For the internal scope of Palopo City, the potential for movement can be seen from the number of people who move, in this case it is assumed that the potential population of productive age (15-65 years) is 67.58% of the total population of Palopo City in 2019 or 124.755 people. To find out the potential for residents who can perform movement in Palopo City, can be seen in the following table.

Table 1. Movement Potential of Palopo City 2020

No	Sub-District	Number of Residents	Movement Potential	Percentage (%)
1	South Wara	12.106	8.181	6,56
2	Sendana	6.829	4.615	3,70
3	Wara	39.955	27	21,64
4	East Wara	39.701	26.828	21,50
5	Mungkajang	8.279	5.595	4,48
6	North Wara	23.621	15.962	12,79
7	Bara	28.781	19.449	15,59
8	Telluwanua	13.911	9.401	7,54
9	West Wara	11.431	7.725	6,19
Palopo City		**184.614**	**124.755**	**100,00**

Source: Analysis 2021

From the table, it can be seen that the potential population that moves the most is in Wara District (21.64%), East Wara District (21.50%) and Bara District (15.59%). Wara and East Wara sub-districts are the most developed sub-districts considering this area has characteristics as an urban area. The lowest potential population movement is Sendana District (3.70%), West Wara District (6.19%) and South Wara District (6.56%). Most of these sub-districts still have characteristics as non-urban areas, where their activities are still dominated by agrarian activities such as agriculture, plantations, ponds and forests.

The distribution of internal movement of Palopo City can be seen from the potential of each existing sub-district. The distribution of movement is largely determined by the type of activity and the number of residents in a land use. The higher the intensity of land use, the higher the generation and pull that occurs. The distribution of this movement will form a pattern and reflect how much

interconnectedness and dependence there are between sub-districts. The smooth distribution of movement is also influenced by the mode of transportation used so that the availability of infrastructure networks and transportation services also greatly affects the distribution of existing movements. The Palopo urban area, which is located in the Wara, East Wara, Bara, and North Wara sub-districts and at the same time becomes the center of regional activities, certainly produces a large number of generation and attraction movements. Sub-districts adjacent to sub-districts that have potential will have a major influence on movement and are generally focused on adjacent sub-districts. The concentration of activities and the development of environmental infrastructure and facilities that have a fairly large level of intensity in attracting movement has resulted in the area becoming congested.

Accessibility to Wara District, North Wara District, East Wara District and Bara District, almost all of which have urban characteristics, is classified as smooth although there are points that have the potential to experience delays. The performance of road transport service capacity in urban areas is also still low because it has not been supported by public transport services for the internal scope of the city so that the capacity is still insufficient. The performance of public transportation services related to the integration factor can be seen in the role of the existing transportation terminals that have not shown significant integration. The location of the terminal which is in the center of activity as a place to raise and lower passengers is one of the factors that causes low road performance.

Transportation performance, still tends to be smooth and fast, but tends to be low because public transportation services are only served by motorcycle taxis, pedicab and online transportation which are paratransit so that it affects the process of passenger movement. Likewise with the comfort factor, this performance still tends to be low because the type of vehicle that operates is only motorcycle taxis with very minimal capacity, causing discomfort in driving. For areas outside urban areas, such as West Wara District, Sendana District and Mungkajang District, public transportation has not been served regularly. To get the spread of movement in Palopo City, data on the potential working age population is used and calculated mathematically through the gravity method. The results of this calculation show that the population distribution has a relationship with the number of working age residents who have the potential to move between sub-districts within Palopo City. The following are the results of the identification of the distribution of movements that occur between sub-districts in Palopo City.

Table 2: Origin Destination Movement Potential of Palopo City in 2020

Zones		Destinations									Sum Total	%
		South	Sendana	Wara	East	Mungkajang	North	Bara	Telluwanua	West		
Origin	South Wara		335	2255	2320	379	1192	1315	565	558	8920	7,24
	Sendana	335		1234	1224	223	635	731	314	314	5010	4,06
	Wara	1948	1066		7809	1329	4048	4597	2006	1984	24786	20,11
	East Wara	1996	1054	7777		1285	3943	4560	1961	1929	24504	19,88
	Mungkajang	394	232	1599	1553		799	946	407	407	6337	5,14
	North Wara	1152	614	4528	4429	743		2905	1249	1192	16812	13,64
	Bara	1271	707	5144	5123	879	2905		1615	1373	19017	15,43
	Telluwanua	546	304	2244	2203	378	1249	1615		591	9130	7,41
	West Wara	540	304	2219	2167	379	1192	1373	591		8765	7,11
Sum Total		8181	4280	24745	24508	5216	14770	16728	8143	7790	**123281**	
%		6,64	3,47	20,07	19,88	4,23	11,98	13,57	6,60	6,32		123281

Source: Analysis 2021

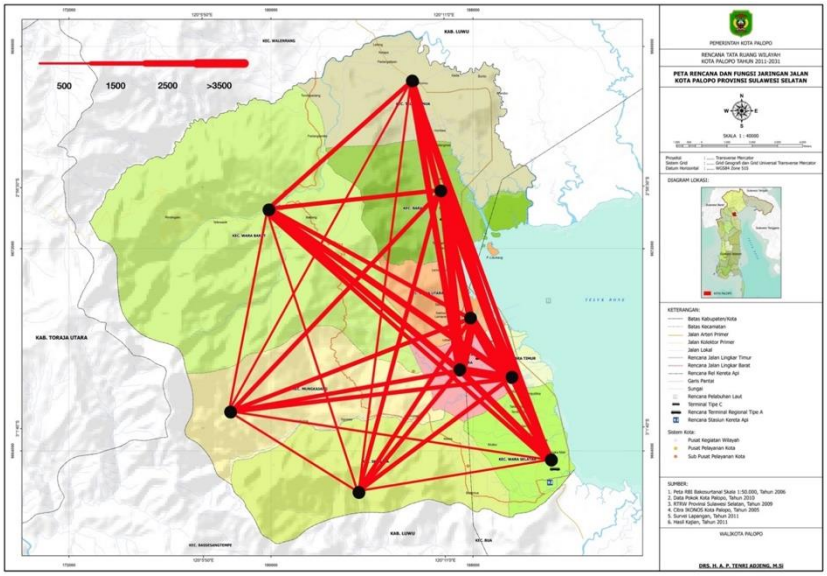

Figure 2: Map of Desired Line movement between zones of Palopo City

4.2 Analysis of Supporting Facilities and Infrastructure Needs for Palopo City Tourism

The development of tourism in a destination is not only seen from the availability or carrying capacity of stand-alone elements, such as accommodation, entertainment or tourist attractions. A destination requires a combination of services between various elements of tourism, not only the availability of tourist attractions, but also multidimensional services. Accommodation, transportation and entertainment become one unit in providing maximum service to tourists. In fact, tourists' needs for accommodation while in Palopo City have been met with the availability of several hotels, restaurants and transportation. The mode of transportation is an important part in supporting the policy of the Palopo City Regional Master Plan for Tourism. For now, the most frequently used transportation is local-based transportation such as ojek, pedicab, online ojek, and bentor (motorized tricycle). In addition, there are also car rental/rental services. For inter-regional public transportation, there are city transportation with several routes.

To support urban tourism activities related to mode integration, adequate transportation facilities and infrastructure are needed to support tourism activities and other derivative activities. To integrate modes, especially road-based transportation modes, a comprehensive transportation system is needed to support tourism activities in Palopo City.

a. Activity system

The need for transportation is directly related to the distribution and intensity of different land use plots within the Palopo City area. Transportation planning for the future always starts with changes and developments in land use or activity systems in an area. Therefore, it is important to know land use planning in planning transportation systems.

The activity system or land use has certain types of activities that will generate movement and will attract movement in the process of meeting needs. This system is a system of patterns of land use activities consisting of a system of patterns of social, economic, cultural and other activities. The amount of movement is closely related to the type and intensity of the activities carried out.

The main activity system that will be accommodated in the planning of mode integration facilities is tourism, which will be integrated with activity centers, both regional activity centers and local activity centers.

Based on the Palopo City Regional Tourism Development Master Plan, there are 48 regional tourism development areas (KPPD), in nine sub-districts, and 58 tourist attractions (DTW) in three regional tourism destinations (DPD) which can be seen in the following table:

Table 4: Identification of tourism spots in the city tourism concept of Palopo City

Tourist Attraction (DTW)	Culinary Tourism Potential	Shopping Tourism Potential
DTW Bukit Sampoddo	Lesehan Asri	City Market
DTW Islamic Centre	Lesehan Lela	Pasar Central
DTW Waekambas	Café Faris	Menara Payung
DTW Pantai Binturu	Lesehan Mandiri	Mega Plaza
DTW Taman I LOVE PALOPO	Kuiner Jalan Lingkar	Pusat kuliner & Oleh-oleh
DTW Pantai Labombo	The Icon	Opsal Plaza
DTW Pelabuhan Tanjung Ringgit	Café Solata	
DTW Tempat Pelelangan Ikan	La Veccia Cafe	
DTW Gedung Kesenian	Kopi Bisang	
DTW Gereja PNIEL	New Up Street	
DTW Istana Langkana'e	Café Kalibre	
DTW Lapangan Pancasila	Enzyme Eatery	
DTW Sungai Jodoh	9 room	
DTW Air Terjun Siguntu	Kopi Koma	
DTW Air Terjun Baba	Sudut Kopi	
DTW Kambo Highland	Sweetnes	
DTW Pasar Modern	Rabbids Cofee	
DTW Taman Kirab	Finare	
DTW Masjid Agung	Titik Nol	
DTW Masjid Jami' Tua	Hill & Tiff	
	Café Lain Hati	
	Kata Kopi	
	Emwe Drink	
	Kampoeng Seafood	
	Bakso Songka	

Source: Analysis 2021

b. Network system and movement

The network system is a mode of transportation (means) and media (infrastructure) where transportation modes move. The network system includes: a network system of roads, railways, bus terminals, railway stations, airports and seaports. While the movement system is caused by the interaction between the activity system and the network system. The existing movement system is a system of movement of people and humans.

Palopo City has been accommodated by a road network that connects activity centers and activity systems. The total length of roads in Palopo City in 2019 was recorded at 502 km, with the Telluwanua District having the largest road length of 76.65 km while the smallest is Sendana District, which is 33.13 km long. The road pattern in Palopo City has a grid pattern and spreads over urban areas, and extends to areas with rural characteristics. In planning the network system, city tourism transport routes that accommodate tourist attractions, public facilities, and other strategic places.

c. System of facilities and infrastructure

To optimize the network system and movement, it is necessary to plan facilities and infrastructure to support Palopo City Tourism. The planned facilities include public transport stops, traffic signs and markings, and pedestrian facilities.

a) Public Transport Stops

The existence of stopping places along public transportation routes is very necessary (Government Regulation No. 41 of 1993 concerning road transportation (article 8), and their placement is arranged in such a way as to suit their needs and must comply with the requirements that have been regulated and stipulated. According to the Directorate General Land Transportation (1996) Types of Public Passenger Vehicle Stopping Places (TPKPU) consist of: 1) Protected stopping places (buses); and 2) Unprotected stop (bus stop)

A bus stop is a place where public passenger vehicles stop to pick up and drop off passengers, which are equipped with buildings. While the bus stop is a place to raise and lower passengers without a protective building. Planning for stopping tourist vehicles and general passengers in the Palopo City Tourism concept is one form of urban public service function provided by the government, which aims to:

- Ensure smooth and orderly traffic flow

- Ensure safety for tourists and users of public passenger transport
- Ensure safety assurance for boarding and/or disembarking passengers
- Make it easier for tourists or passengers to be able to access public transportation
- Make it easier for tourists or passengers to change modes of public transportation or buses.

Considerations in planning public passenger vehicle stops to support the City Tourism Concept of Palopo City are:

- Located along planned public transport or bus routes
- Located on pedestrian paths and close to pedestrian facilities.
- Set close to a tourist attraction, activity center or settlement.
- Set close to transportation infrastructure such as Terminals, ports.
- Equipped with signposts
- Does not interfere with the smooth flow of traffic planning for stops along public transport routes

The planning of public transportation stops to support City Tourism of Palopo City is divided into two types, namely large bus stops and small bus stops. Large bus stops are designated for routes within the city for locations with high tourist activity, or places to change modes such as terminals, Pancasila field, culinary centers and souvenirs and others. Small bus stops are placed at tourist attraction locations scattered within the Palopo urban area.

Table 5 Criteria for Location of Public Transportation Stops as a means of integrating modes of supporting City Tourism Palopo

Public Transport Stopping Places	Purpose	Location Criteria
Stops with protection (large bus stops)	Helps smooth and orderly traffic flow	Located along planned public transport or bus routes
Unprotected stopping place (bus stop/small stop)	Ensure safety for tourists and users of public passenger transport	Set close to tourist attractions, activity centers or settlements.
	Make it easier for tourists or passengers to be able to access public transportation.	Set close to transportation infrastructure such as terminals, airports and ports
	Make it easier for tourists or passengers to change modes of public transportation	Does not interfere with the smooth flow of traffic planning for stops along public transportation routes
		Located on pedestrian paths and close to pedestrian facilities or equipped with pedestrian facilities
		Equipped with signposts

b) Traffic signs and markings

Traffic signs and markings as a tool to control traffic, especially to improve safety and smoothness. In the road system, road markings and traffic signs are physical objects that can convey information (orders, warnings, and instructions) to road users and can influence road users. For the planning of facilities for integration of supporting modes of City Tourism in Palopo City, several signposts are planned, such as stop signs placed 200 meters before and after the bus stop, signs indicating the location of tourist objects, and others.

c) Pedestrian Facilities

Pedestrians are an important form of transportation, especially in tourist areas, therefore the needs of pedestrians are an integrated part of the road transportation system. Pedestrians are in a weak position if they mix with vehicles, then they slow down the flow of traffic. Therefore, one of the main objectives of traffic management is to try to separate pedestrians from the flow of motorized vehicles,

without causing major disruptions to accessibility. In addition, pedestrian facilities can also directing tourists or passengers to easily access the nearest bus stops.

4.3 Determining the Location of the Stops and Routes

From the analysis of the need for facilities and infrastructure, it will determine the location of the bus stop and mini bus routes in the city tourism concept of Palopo City. Referring to the Regulation of the Minister of Transportation No. 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on the route, and the Regulation of the Minister of Transportation No. 10 of 2012 concerning Minimum Service Standards for Road-based Mass Transportation, Palopo City can be categorized as an agglomeration area. Agglomeration is defined as a stand-alone urban area or a core urban area with smaller urban areas surrounding it and having functional linkages connected to an integrated regional infrastructure network system and forming a system. This agglomeration area will be connected and accommodated for its movement between regional activity centers in areas with urban characteristics and local activity centers in the vicinity.

For movements with tourism characteristics in Palopo City, they are accommodated by offering a concept titled City Tourism, where public transport routes are planned to accommodate the movement of tourists to tourist attractions and transportation facilities.

There are at least two programs for the development of City Tourism supporting mode integration facilities, namely the construction of public transport stops and pedestrian development. The construction of facilities that become the main priority is at the node points of movement and mode integration such as terminals, Pancasila Square which functions as a city square, as well as a Culinary Center and souvenirs/ Payung Tower. After that, development will be carried out at tourism points in the Palopo urban area.

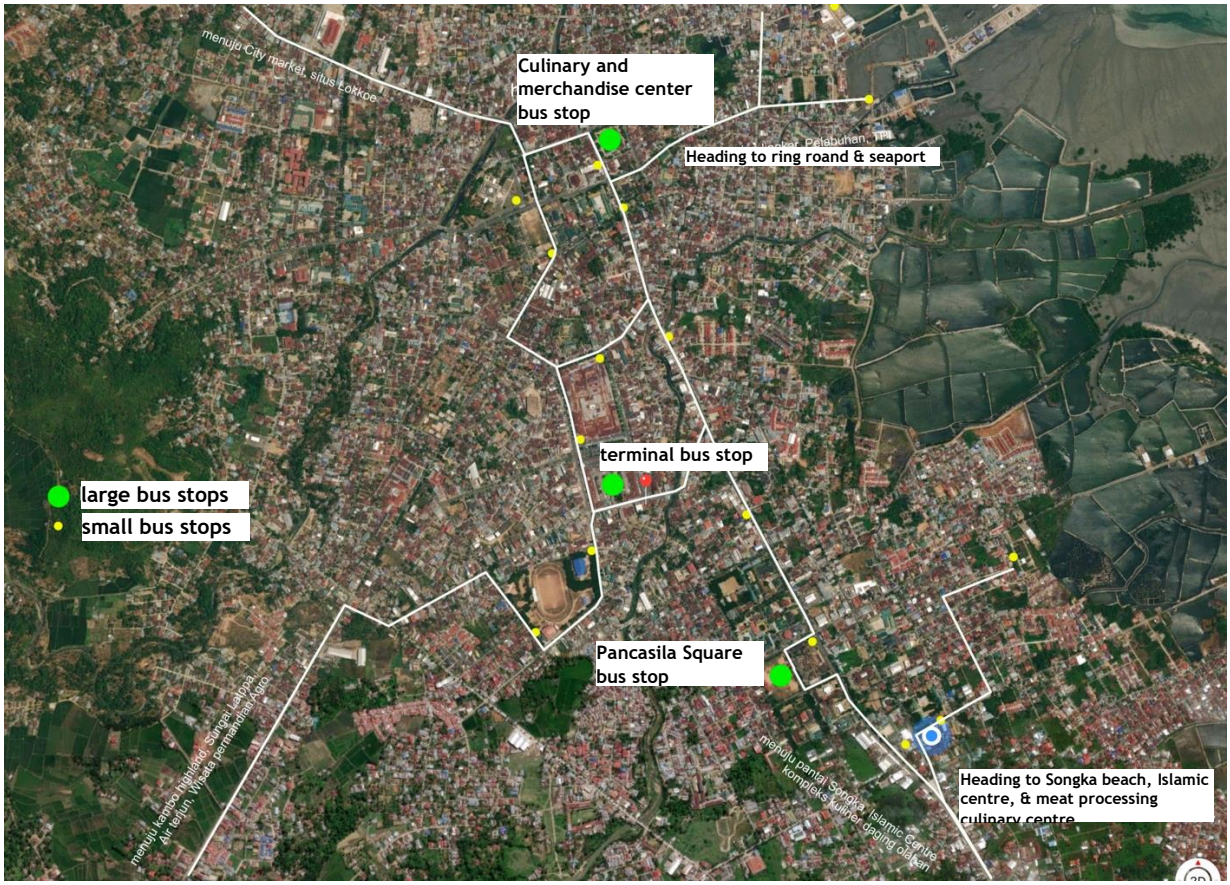

Figure 3. Route Plan and Bus Stop Locations

There are at least 3 routes that can be planned to accommodate tourist movements, the first route is from urban areas to the east where there are attractions of Kambo Highland, Latuppa River, Agro baths, and Latuppa Waterfall. The second route from urban areas to the south is Binturu Beach,

Islamic Center, Songka Processed Meat Culinary, and Sampoddo Hill. Route three from urban areas to the north where there is City Market Shopping Center, Lokkoe historical site, to Maritime Culinary on the Ring Road.

4.4 Potential Benefits

In its operation, City Tourism Palopo City has several potential benefits, both from the social and economic sectors, as well as the financial sector. The socio-economic sector can technically be obtained from the opening of job opportunities, an increase in the number of tourist visits, opportunities to create business opportunities, to an increase in Regional Original Income (PAD) and economic growth. Benefits from the financial sector, potentially obtained from the sale of tourism bus tickets, ticket sales for tourist attractions, rental of retail and stalls at tourist attractions, rental of ATM space and advertising space at bus stops, increased income for restaurants, cafes and restaurants, increased central income spending, increasing the value of long stay and expenditure of tourists.

All these potential benefits can be considered to attract private parties or business entities to be involved in this project. Especially in the financial sector, where with a certain scheme, the government can maximize the role of the private sector in planning, development and operation.

Table 6. Potential Benefits from City Tourism Operations

Sector		Potential Benefits
Social & Economic	General	Job creation
		Increased tourist visits
		Opportunity to create business
		PAD increase and economic growth
Financial	Bus tour operations	Bus ticket sales
		Sales of entrance tickets to tourist attractions

4.5 Financing scheme

Success in implementing PPPs in tourism infrastructure projects requires all stakeholders to be involved and responsible **(Khakimova and Fattakhova, 2016)**. For this reason, it is necessary to identify the tasks and responsibilities of the Palopo City government and the private sector regarding the implementation of this partnership. Adopting the PPP scheme with functions and responsibilities as suggested by **Franco and Estavo (2010)**, along with the division of responsibilities in the City Tourism financing scheme of Palopo City.

Table 7. Roles and responsibilities of partners in the Palopo City Tourism PPP

Palopo City Government	Private Party/Business Entity
Committed in developing and advancing the tourism sector	Concern for environmental and social aspects
Creating a conducive tourism investment climate	Develop skills and competencies required for the development and operation of tourism businesses
Prepare adequate tourism supporting infrastructure and ensure its maintenance	Collective and professional responsibility for practicing industry standards, ethics and tourism business governance
Creating conducive market conditions to promote sustainable tourism	Preserving culture, traditions and the environment, which oriented to tourist and sustainable development
Running an effective and efficient bureaucracy, as well as support and services in the private sector	Involving local communities in tourism development
Employment regulations that are more flexible but still maintain the rights of workers	Provide professional and certified workforce skills training
Stable and consistent regulations and fair tax policies	Cooperate with the government to ensure the safety and comfort of tourists

PPP considerations Palopo City Tourism requires various stakeholders to be involved in the PPP implementation process to maintain a balance between asset value for investors and project

development costs. Maintaining balance requires that all parties be involved in all stages of the project. **Cheuk et al (2010)** evaluated the important role of the private and public sectors in the context of tourism planning and development. Research findings reveal that the private sector is less involved in the decision-making process to determine the direction of tourism development and tourism planning. The public sector, in this case the government, remains dominant in the planning stage and only involves the private sector in the implementation stage. In the context of the Palopo City Tourims PPP, this will cause problems, if the number of tourists projected or targeted in the Palopo City RIPPARDA does not match the planned number.

In the study of **Wong et al (2012)**, found that a certain level of trust to the parties in PPP transactions must be established at an early stage, to ensure mutual benefits and the goals of cooperation can be realized. In this case, the Palopo City Government must take full responsibility for formulating a transparent and practical Palopo City Tourism PPP policy. This is necessary in managing political risk as one of the obstacles in the implementation of PPP. In addition, empowering the community must also be one of the main considerations in the Palopo City Tourism PPP. The ability to finance tourism infrastructure projects will certainly help prosper residents, protect cultural and environmental heritage through cultural tourism and ecotourism, and increase the interest of visiting tourists **(Tshehla, 2018)**.

It is important for the Palopo City Government to establish cooperation with the private sector who will help and share roles through socio-economic programs, while still being able to generate benefits. For example, private companies can assist local residents in the manufacture of arts and cultural products and crafts for tourists, or ecotourism activities by providing training for young entrepreneurs in Palopo City. This is important for the success of the Palopo City Tourism PPP before discussing how the financing and partnership schemes will be implemented in the Palopo City Tourism PPP. There are several schemes that can be applied to City Tourism planning in Palopo City. For more details, it can be seen in table 8. Meanwhile, the things that can affect the Palopo City Tourism PPP can be seen in table 9.

Table 8: Alternatives for Palopo City Tourism PPP Scheme

Financing	**Partnership Scheme Alternative**	**Description**
a) Construction of bus stops, pedestrians, and their accessories. b) Procurement of minibus transportation units	*Service Contracts and Management contracts*	All shelters, pedestrian stations, and other infrastructure are built by the government, but in operation they will be handed over to the private sector
	Design-Build-Finance-Operate/Maintain (DBFO, DBFM or DBFO/M	The private sector that designs, builds, finances, operates and or maintains new facilities such as bus stops, pedestrian stations, and their equipment under long-term leases. And at the end of the period will be returned to the government
	Build-Own-Lease-Transfer (BOLT).	The government provides grants for the right to finance and build shelters, pedestrian stations, and others and then lease them back to the government with certain fees and agreements with the private sector. This facility is still operated by the private sector, but at the end of the period it will be given to the private sector.
	Concessions	In this form, the government makes and provides assistance or subsidies (money) to private companies to build and operate facilities for a certain / fixed period of time. The project owner remains with the government and the right to supply services remains with the government. In this concession, payments can be made in two ways: (a) concession executors who pay to the government because of concession rights (b) the government pays to concession executors. Both payments are based on the agreement of both parties with special conditions. For a government-to-concession mode of payment, the government must make the project commercially viable or reduce the level of commercial risk borne by the private sector, usually in PPP projects that are under development or whose markets are untested. The concession period is 5-50 years
Operation	*Affermage / Lease*	Operators in this case are private parties who are responsible for operating transportation and maintaining infrastructure facilities (already built previously) such as shelters, pedestrians, signs, markers and others. The operator does not incur any investment. But often, this contract model is combined with other models such as: build-rehabilitate-operate-transfer model. In this case, the contract period is relatively longer and the private sector requires a significant investment. In this condition, it is very common to use the form of affermage and a lease. The two forms are only technically different. In the case of a lease, the operator retains the income earned from the consumer or user of the facility and pays a leasing fee in a certain amount to the contracting authority (government). However, for affermage, operators and contract givers share revenue from consumers or users. For land used in this form it is usually transferred after 15-30 years.

Financing	Partnership Scheme Alternative	Description
	Service Contracts and Management contracts	Is a contractual plan to manage or manage part or all of a public project by a private company. This contract allows private sector expertise to enter into service design and delivery, operation control, workforce management, equipment procurement, without incurring commercial risks. The government remains as the owner of the facilities and equipment. The private sector gets a fee to manage and operate on a performance basis.

Table 9: Factors influencing the success of the City Tourism PPP in Palopo City

No	Factor	Description	Source
1	The Comprehensive PPP Capability of the Palopo City Government	The government's ability to recognize the characteristics and implementation of PPP projects will be positively correlated with the success of PPP implementation. This government capability is in the form of: its ability to identify valuable PPP projects, the ability to make detailed plans for PPP projects, the ability to cooperate with the private sector in terms of development, the ability to make PPP contracts that are consistent and profitable for the parties, and financial capability to invest with the parties.	Estache (2014); Akhmetshina et al (2017); Qizilbash (2011); Iossa and Martimort (2009); Liu and hiraku (2009); Teisman and Klijn (2002); Mathur (2014); Nsasira et al, (2013); Carbonara et al (2013); Qu and Loosemore (2013); (Maramis, 2018); Perpres 38 tahun 2015; PPN no 4 tahun 2015
2	Institutionalization in the City Tourism PPP of Palopo City	The availability of a special agency that handles PPP, which works under flexible regulations and professional management will be positively correlated with the successful implementation of PPP.	
3	Attractive Rewards for Private Parties	The availability of attractive or valuable returns for the private sector involved in PPP projects is correlated with the success of PPP implementation. The ease of the procedure for payment of rewards or returns and its consistency in the future will reduce the risk of rewards or returns, this will result in high attractiveness of the private sector to participate in PPP projects.	
4	Legal certainty	The success of PPP implementation is also influenced by legal certainty and guarantees. The legal aspect will reduce the risk in the future if there is a conflict between the parties who signed the PPP contract. The more detailed the PPP contract or legal agreement, the better the PPP contract or legal agreement. This condition will create a sense of trust between the parties so that they will focus on operations or activities for the successful implementation of the PPP project.	
5	Opportunistic Behavior	The success of a PPP project in the long term will be determined by whether or not the PPP contract is capable of minimizing the opportunistic behavior of the parties involved in it	
		Opportunistic behavior can be caused by asymmetric information, imperfect control, lack of commitment, self-interest seeking and asset specifications. Asymmetric information can cause adverse selection or moral hazard in the implementation of PPP contracts.	
		The higher the inability of the parties to control one another, the greater the possibility of opportunistic behavior from the parties in PPP.	
		The significant aspects of penalty and the details of the PPP contract can be an obstacle for the parties to behave opportunistically. Significant penalties mean that there are greater costs to the parties if they discontinue the contract rather than continue it.	

No	Factor	Description	Source
		Forms of opportunistic behavior that can occur in a PPP contract can be in the form of: Underbidding, Free riding, Sitting on the job, Poor quality of performance, Hostile takeover, Power misuse and social surplus capture. (adopted from Qu Y and Loosemore M, 2013).	
		At the pre-tendering stage (opportunistic behavior that can occur are: free riding (from the government) and power mis-use (from the government) At the bidding stage (opportunistic behavior that can occur are: free riding (government), underbidding (private). At the building stage (opportunistic behavior that can occur is sitting on the job (private), poor performance (private), power mis use (government), social surplus capture (government or private). hostile takeover (government) and social surplus capture (government or private) (adopted from Qu Y and Loosemore M, 2013).	
		Most of the risks in PPP are between the bidding and development period, while the smallest is in the pre-tender stage. Self interest seeking is the dominant factor or element influencing opportunistic behavior in PPP, and the lowest is the reason for environmental uncertainty. Superordination aspect is the most dominant aspect used as a form of opportunistic behavior in PPP. (adopted from Qu Y and Loosemore M, 2013).	

5. CONCLUSION

Konsep Palopo City Tourism menawarkan integrasi aktifitas wisata pada wilayah perkotaan Kota Palopo dengan penyediaan moda angkutan pariwisata yang terintegrasi, dilengkapi dengan infrastruktur penunjang seperti halte, bus stop, jalur pejalan kaki, dan kelengkapannya. Namun penerapan konsep tersebut akan terkendala oleh masalah pendanaan mengingat terbatasnya keuangan daerah dan tuntutan untuk memprioritaskan sector-sektor yang lebih strategis selain pariwisata. Penerapan skema KPBU atau PPP pada sector pariwisata, dalam konsep Palopo City Tourism, baik dalam pembangunan, pengoperasian hingga potensi benefitnya menjadi alternatif mengingat keterbatasan pendanaan daerah. Dari hasil analisis pola pergerakan dan lokasi objek wisata, terpilih 3 rute optimal yang dapat mengakomodir pergerakan wisatawan, yaitu rute selatan, rute barat dan rute utara. Dari hasil analisis kebutuhan prasarana, dibutuhkan pembangunan infrastruktur berupa halte dan bus stop, serta jalur pedestrian dan kelengkapannya pada titik-titik objek wisata dan beberapa area komersial. Selain itu diusulkan pula beberapa skema pembiayaan KPBU yang dianggap cocok dengan konsep City tour Kota Palopo ini, antara lain skema *Concessions maupun Affermage/ Lease,* seperti *Service Contracts and Management contracts, Design-Build-Finance-Operate/ Maintain (DBFO, DBFM or DBFO/M), Build-Own-Lease-Transfer (BOLT).*

Usulan konsep dan alternatif skema pembiayaan ini diharapkan dapat membantu pemerintah Kota Palopo untuk meningkatkan kunjungan wisatawan dan pengembangan destinasi wisata sesuai dengan tujuan RIPPARDA Kota Palopo, sekaligus untuk menjawab permasalahan pendanaan proyek City Tourism ini dimasa yang akan datang.

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School Library Development Plan Application Based on Web

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Keywords

Web; Library; PHP; MySQL; Waterfall

Abstract

Libraries are part of learning resources that must be owned by every school and college. Library make students seek knowledge easily. Vocational High School State (SMK) 2 Luwu is one of the secondary schools that has not implemented a website-based system. This is because the library of SMK Negeri 2 Luwu still uses a manual system. As in lending and returning services, they still use a recording system in the borrowing book. In addition, when there are new books added, the librarian does not record the book data, only gives the ID to the book and immediately stores it on the appropriate shelf in the book category. The method used in this research is the waterfall method. This application is designed using the UML model and built using the PHP programming language and MySQL database.

1. INTRODUCTION

The human need for technology today cannot be separated from the life of each person. Because with any technology we can easily get information. There are many ways to access or get information through the internet, one of which is accessing the web. The web is a technology that has been used for a long time to access information, but there are still many agencies that have not implemented the web for administrative or other need (Fatimah & Elmasari, 2018) (Hadi, 2020) (Dani & Kariadi, 2018). The use of websites in conveying information is very helpful and useful for institutions or companies. Submission of information with the website is very fast and can be done from anywhere (Suppa & Saldi, 2018) (Apriyanto, 2018). Not limited by place, time and cost (Firman, Wowor & Najoan, 2016)

The library is one part of educational institutions as a learning resource that must be owned by every school, college. Because students easily seek knowledge through the library (Hutagalung & Arif, 2018). The school library is a repository of knowledge in schools, until now the library is less attractive to students to read books or look for book references. Why is that, because students or students prefer to find information via the internet that is easy to get (Pasaaribu, 2021).

Seeing the phenomenon of implementing information systems in school libraries, it can be said that there are still many schools that use manual systems. Especially in SMK Negeri 2 Luwu which has not implemented a website-based system. This is because the library of SMK Negeri 2 Luwu still uses a manual system. As in the process of borrowing or returning books, which is still done by recording in the borrowing book. Besides that, when there are new books added, the librarian does not record the book data, only gives the ID to the book and immediately stores it on the appropriate shelf in the book category, so there is no regular book collection here.

Another obstacle is that if there are library members who will borrow books, it will be difficult to search for books on the bookshelves. In making reports, librarians still have problems because they have to take a long time to record and present reports where the officer must rewrite the report by recording existing borrowing data to be given to the principal.

1.1 Design an Build

Design and Build is the initial stage of making sketches and forms that have never been made at all and then managed to become a picture or sketch that has the desired function (Fajriya, et al. 2017). Design is an effort to make software that is translated from the results of the analysis so that it can create a new system or an existing system can be repaired. (Samania, et al. 2020).

1.2 Library

The library is a room containing books that are neatly arranged which can usually be found in schools or in certain cities (Fatimah & Elmasari, 2018). Libraries are centers of learning activities in educational institutions, many institutions realize that having a library within the scope of a school is one of the progress and added value in the morning of education for students, teachers and others (Pasaaribu, 2021).

1.3 *Unified Modeling Language* (UML)

UML (*Unified Modelling Language*) is a standard language that is widely used in the industrial world for defining requirements, making analysis and design, and describing architecture in object-oriented programming (Salahuddin, 2015). UML is one of the tools/models used for system design or for developing object-oriented systems. Writing standards in UML are in the form of blueprints in the form of writing objects or classes, making it easier for developers to build systems or applications according to the existing design (Sonata & Sari, 2019).

1.4 Web

Web atau *World Wide Web (WWW)* is a collection of pages that can display information either text, images, animations by using a web browser. Sir Timo-thy John "Tim" Berners–Lee in 1980 was the inventor of the British web (Fatimah & Elmasari, 2018). The web is an application tool that aims to display page files so that users can access them via the internet network (Destiningrum & Adrian, 2017).

Website or abbreviated as web, can be interpreted as a collection of pages that can contain information in the form of text, video, audio, images, animations available through the internet network (Josi, 2017).

A collection of content that can display information in the form of moving or still images, text, sound, animation, or a combination of all of them that are interrelated either in dynamic or static form and are connected to the internet network. (Batubara, 2012)

2. METHOD

The method used for this research is the waterfall system development method. The waterfall method is a sequential and gradual method that starts from observing, designing, programming, testing and implementation.

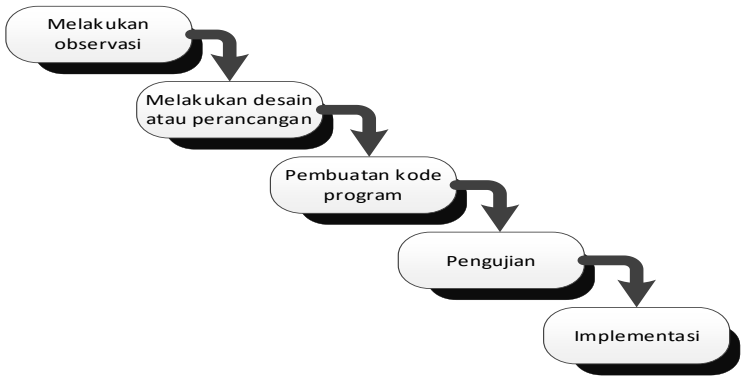

Figure 1. *Waterfall Method*

2.1 System Plan

The system running on the library at SMK Negeri 2 Luwu can be seen in Figure 2

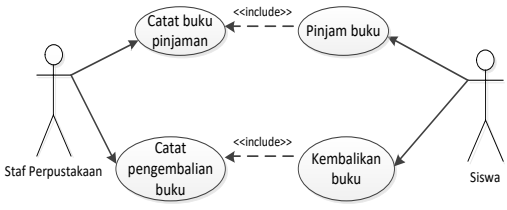

Figure 2. Sistem Berjalan

In the system running on students who borrow books in the library and the data on borrowing books is recorded by the library staff. Likewise with the return of books, students who will return books will be recorded by the library staff.

The analysis of the proposed system in this study can be seen in the image below:

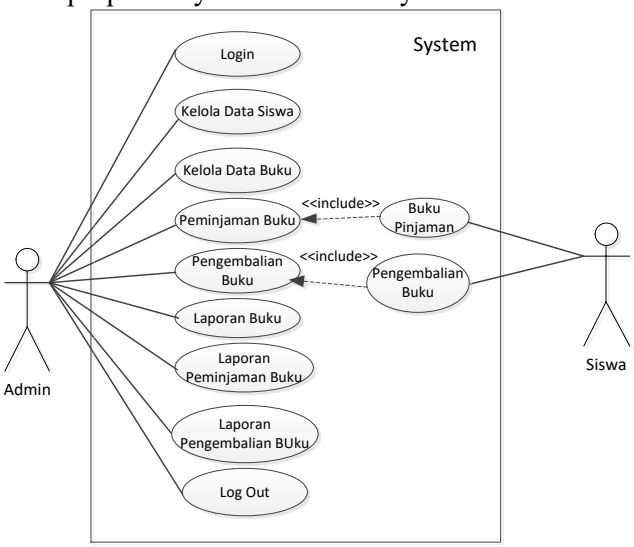

Figure 3. Proposed system analysis

2.2 Analysis

Analysis of the proposed system or procedure is to describe systematically the activities that occur in the system. In the proposed system, the admin can access all existing systems such as logging in, managing student data, managing book data, managing book lending transactions, managing book return transactions, and making book data reports. For students can see borrow books and return books.

2.3 Login Page Plan Design

The design below is the design of the library information system login page at the State Vocatio High School (SMK) 2 Luwu:

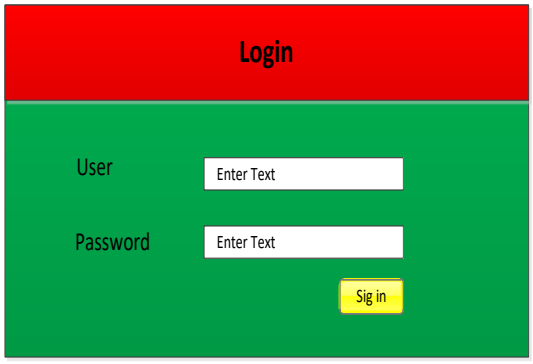

Figure 4. Login Page Plan Design

2.4 Admin Menu Design Display

Below is the admin menu page design on the library information system at the State 2 Luwu Vocational High School (SMK):

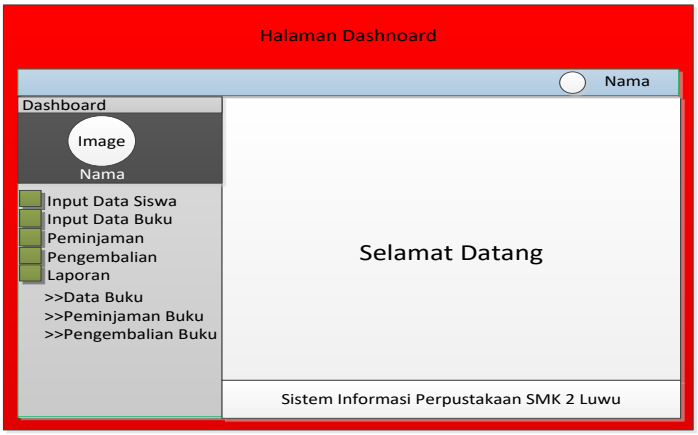

Figure 5. Admin Menu Design Display

2.5 Student Data Input Design

Below is the design of student data input on the library information system at the State 2 Luwu Vocational Hig School (SMK):

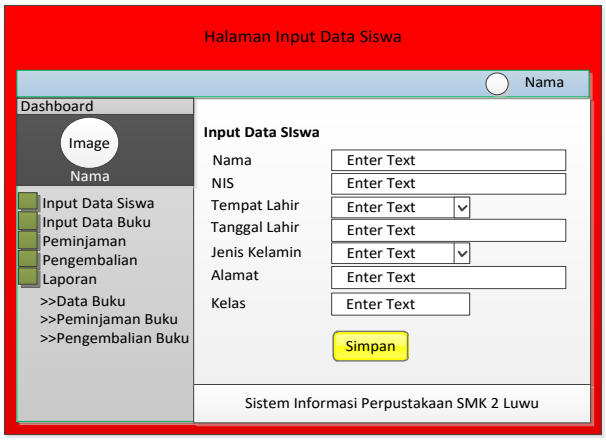

Figure 6. Student Data Input Design

3. DISCUSSION

3.1 Login Page

The login page is the first page that appears when running this system, here is the login page:

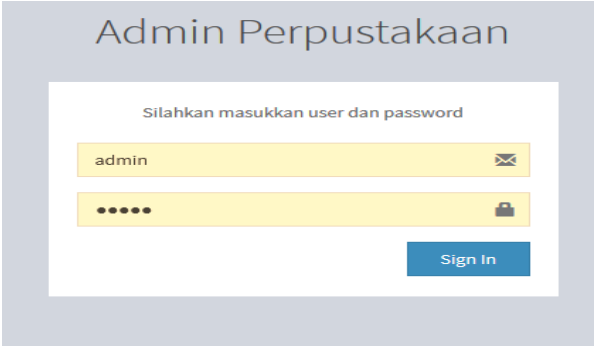

Figure 7. Login Page Display

3.2 Dashboard Appereance Page

The admin dashboard page display is the initial view when the admin successfully logs in, for more details, it can be seen in the image below:

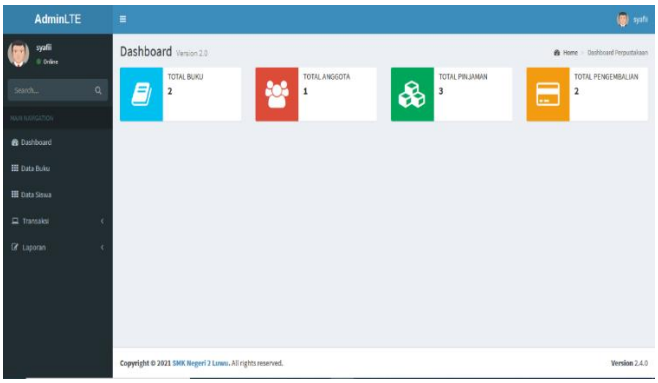

Figure 8. Tampilan Halaman *Dashboard*

3.3 Book Input Page Display

The book input page display is a display for managing book data such as data input, editing data and deleting data, for more details, see the image below:

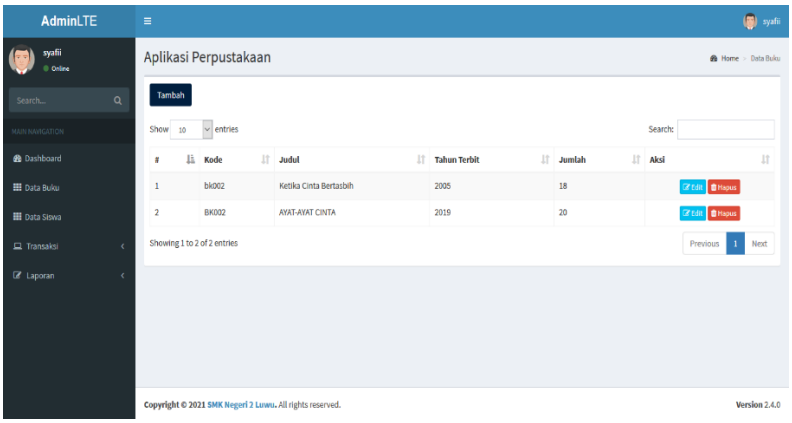

Figure 9. Book Input Page Display

3.4 Student Input Page Display

The student input page display is a display for managing student data such as data input, editing data and deleting data, for more details, see the image below:

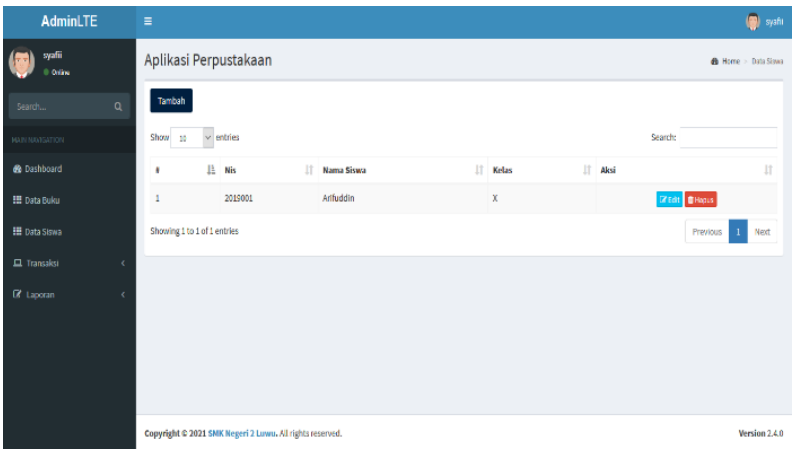

Figure 10. Student Input Page Display

3.5 Loan Page Display

The borrowing page display is a display for borrowing books, for more details, see the image below:

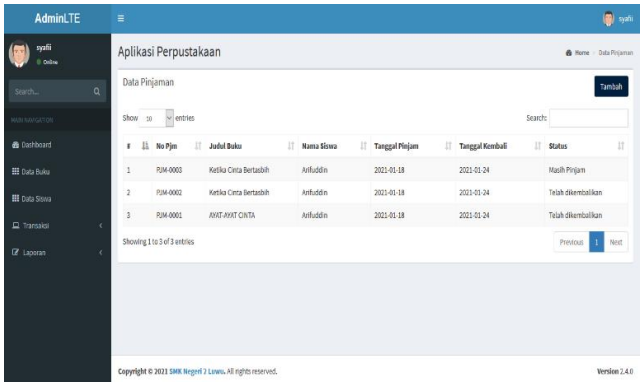

Figure 11. Loan Page Display

3.6 Return Page Display

The return page display is a display for returning books, for more details, see the figure below:

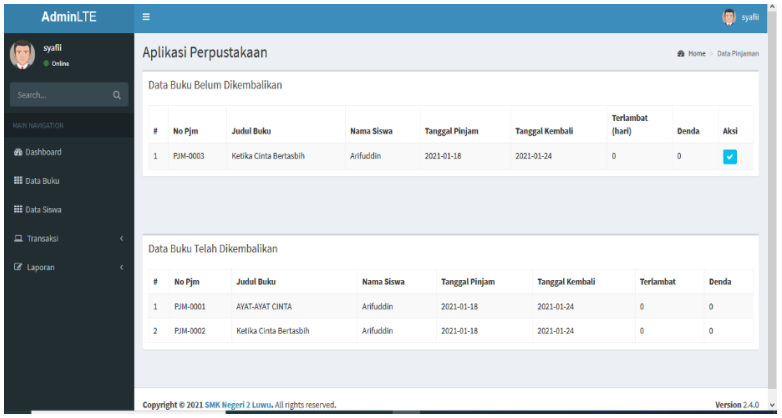

Figure 12. Return Page Display

3.7 Book Stock Report Page Display

The book stock report page display is a display for printing book stock reports, for more details, see the figure below:

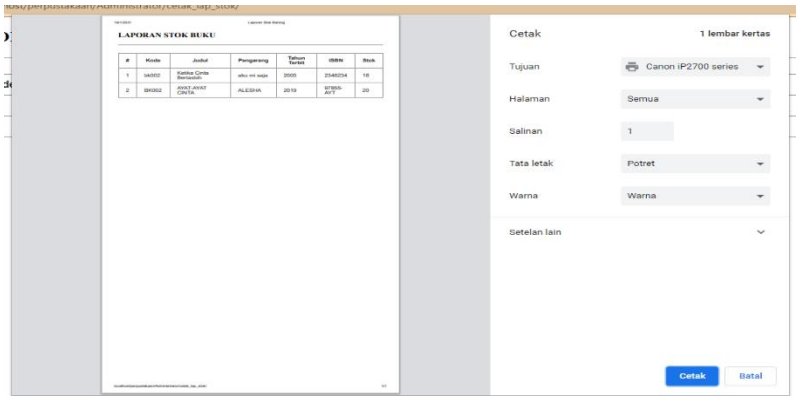

Figure 13. Book Stock Report Page Display

3.8 Loan Report Page Display

The loan report page display is a display for printing loan reports, for more details, see the figure below:

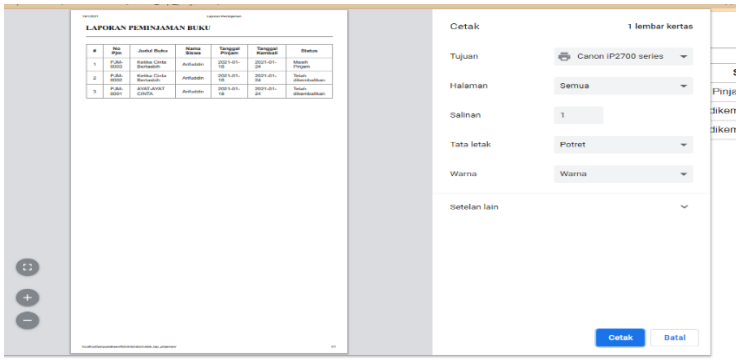

Figure 14. Loan Report Page Display

3.9 Returns Report Page Display

The return report page display is the display for printing the return report, for more details, see the image below:

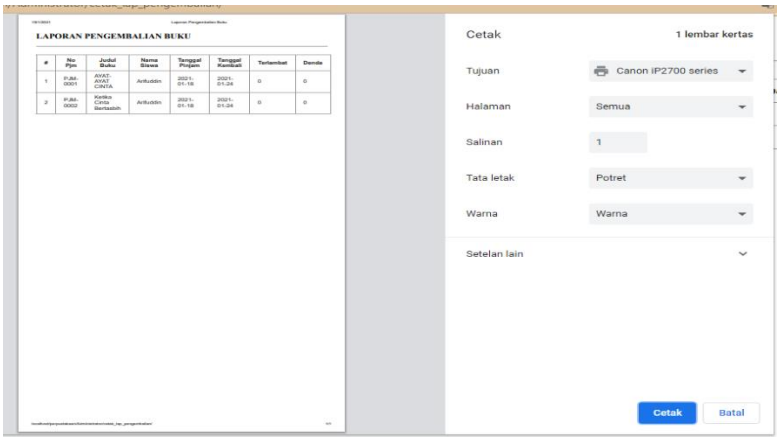

Figure 15. Returns Report Page Display

4. CONCLUSSION

Based on the discussion about the web-based school library design, the conclusions of this study are as follows:

1. The design of the library based at SMK Negeri 2 Luwu is designed using the UML model
2. The design of the library information system at SMK Negeri 2 Luwu was built using the PHP programming language and MySQL database and HTML as a markup language.
3. This library system has several pages including login page, dashboard page, book page, student page, loan page, return page, book stock report page, loan report page, return report page

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