

# Critical Success Factors for PPP Implementation of the Public Street Lightning Project in Madiun Regency in Achieving the First Financial Closing in Indonesia

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*Abstract—Based on data from the National Medium Term Development Plan for 2020-2024, the need for infrastructure development in Indonesia reaches Rp. 6.445 trillion. One of the financing schemes pushed by the Government of Indonesia in infrastructure development is the Public Private Partnership scheme. PPP Scheme with Minister of Home Affairs Regulation No. 96/2016 has been implemented in Indonesia since 2016, but until now the number of successful infrastructure projects with the PPP Availability Payment scheme is only 1 project with a total investment of Rp. 100.6 billion, namely the Madiun Public Street Lightning Project. This research was conducted to identify Critical Success Factors in implementing the Regional PPP scheme in the Madiun Public Street Lightning Project to achieve the first financial closing in Indonesia. The sample in this study is 37 respondents who have experience in implementing Regional PPP schemes, especially in public street lighting projects in Indonesia. Data were collected using in-depth interviews and statistical analysis of multiple linear regression. The results of this study indicate that the project preparation stage has a 95.40% influence on the success of the Regional PPP availability payment scheme project. Critical success factors in Regional PPP projects are the GCA's understanding of the PPP project, the GCA's commitment to the PPP project, complete institutions, coordination with stakeholders, and conformity of the project structure to regulations and the ability of the project owner.*

*Index Terms— Financing, Infrastructure, PPP, State Budget.*

## I. INTRODUCTION

The Indonesian government has a strong commitment to accelerating private sector participation in infrastructure development and investment in Indonesia. Given the massive infrastructure needs related to economic growth and it is believed that only relying on the government budget for infrastructure funding will not achieve the desired results.

In The National Medium-Term Development Planning (RPJMN) 2015-2019, the total funding needed to provide infrastructure is Rp. 4.796,2 trillion, while the requirement value for the RPJMN 2020-2024 is Rp. 6.445 trillion. From the value of the funding needed, the Central Government and Regional Governments in the State Revenue and Expenditure Budget (APBN/APBD) each can only provide funding of Rp. 1,978.6 trillion in the RPJMN 2015-2019 and Rp. 2.385 trillion in the RPJMN 2020-2024. Meanwhile, State-Owned Enterprises (BUMN/BUMD) can provide funding of Rp. 1.066,2 trillion in the RPJMN 2015-2019 and Rp. 1.353 trillion in the RPJMN 2020-2024 to meet infrastructure provision. The remaining funding is expected to be fulfilled by the respective private companies, with an amount of Rp. 1.751,4 trillion and Rp. 2.707 trillion.

In order to achieve the GDP growth target in the RPJMN 2020-2024, innovative efforts are needed to encourage community and business participation through PPP schemes and other creative financing schemes. This is in line with the new paradigm of infrastructure financing which makes the

State Revenue and Expenditure Budget (APBN/APBD) the last alternative source of financing.

Most of the Regencies/Cities in Indonesia fall into the category of "not yet independent" (88.07% or 443 of 503 Regencies/Cities). Meanwhile, 50 Regencies/Cities (9.94%) fall into the "towards independence" category. Only 10 Regencies/Cities (1.99%) have achieved "independent" status. This shows that the gap in fiscal independence between Regencies/Cities nationally is very high (BPK, 2021).

This unbalanced level of fiscal independence also shows that most regencies/cities in Indonesia still depend on the central government to supply funds for the regional revenue and expenditure budget, compared to contributing their own revenue to finance their development (Afandi, 2017). The main contributors to this problem can be caused by: (i) District/City efforts that are less than optimal in carrying out their autonomous role; (ii) limited capacity in developing regional potential or not having carried out in-depth analysis to explore potential sources of regional income; and (iii) although there is a potential source of revenue for the Regency/City, this is beyond the authority of the Regency/City (Christianingrum and Prasetyo, 2020).

Based on data from The Ministry of National Development Planning/Bappenas (2022), there are 79 ongoing PPP projects in Indonesia with a total investment value of USD 29,304.7 million or Rp. 446.8 trillion. In addition, data from Bappenas in 2023 reveals that several regional availability

payment projects have been excluded from the PPP Book due to a lack of further progress, including the Bandung LRT, Surabaya APM, Medan LRT, Street Lighting in Bandung, Gorontalo Regional Public Hospital and Sidoarjo Regional Public Hospital.

To date, only one PPP project under the availability payment scheme has successfully implemented a transaction, namely the Public Street Lighting project in Madiun Regency. The Regent of Madiun Regency as the Head of Regional Government has signed a cooperation agreement with PT. Tritunggal Madiun Terang as the Implementing Business Entity, with a total investment of Rp. 100.6 billion.

Based on the background of the problems above, the scope of the problem that will be studied in this study is the extent to which the Critical Success Factor implementation of the Madiun PPP Project in achieving the first financial closing in Indonesia. From the scope of the problem, this study aims to: (a) determine the influential factors behind the success of the Public Street Lightning Madiun infrastructure PPP project; and (b) to find out the role of stakeholders behind the success of the Public Street Lightning Madiun infrastructure PPP project with the Availability Payment scheme.

## II. LITERATURE REVIEW

### A. Public Private Partnership (PPP)

Public Private Partnership (PPP) is a unique procurement approach in which projects are implemented through contracts between private companies and the government to provide services or assets (Tang L. et al. in Hai et al., 2021). Due to the length of the concession period and the involvement of various stakeholders, PPP has a high-risk character (Kwak et al., 2009). PPP has been established internationally as an alternative financing strategy in more than 85 countries for the procurement of economic and social infrastructure projects (Regan et al., 2009). PPP has developed rapidly in the last few decades to provide urban infrastructure and services in several countries (Doloi and Jin, 2007). Alternative financing through the PPP scheme in infrastructure development has been widely implemented in several countries, including Indonesia. This scheme is considered far more efficient and effective because it involves the private sector in its implementation.

The Indonesian government itself has issued Presidential Decree No. 67 of 2005 concerning Cooperation between the Government and Business Entities in the Provision of Infrastructure as the basis for implementing PPPs in the infrastructure sector. Presidential Decree No. 67 of 2005 was then revised 3 times before being replaced with Presidential Decree No. 38 of 2015 concerning Cooperation between the Government and Business Entities in the Provision of Infrastructure.

PPPs are considered to be more effective in improving the quality of planning, spending and maintaining public assets (Wulyono & Perwitasari, 2017). In addition, the factors that determine the success of infrastructure development in the

PPP scheme include (a) a stable macroeconomic environment; (b) shared responsibility between the public and private sectors; (c) a transparent and efficient procurement process; (d) a stable political and social environment; (e) government and private control allows for continuity and guarantees the proper implementation of infrastructure development.

Based on Government Regulation No. 38 of 2015, PPP must be implemented based on 6 principles, namely (a) Partnership; (b) Benefit; (c) Be competitive; (d) Risk control and management; (e) Effective; and (f) Efficient. These principles will ensure that the private sector will not suffer losses by cooperating with the government/public sector. The risks that may arise from a PPP will be well distributed and the most important part is that the government will ensure that the private sector as a partner will get back its investment (cost of capital and operational costs), including profits at the end of the cooperation period. Return on investment for private partners will be determined by Government Contracting Agency. Returns must cover capital costs, operating costs and profits for private entities.

### B. PPP Availability Payment Scheme

Based on Minister of Finance Regulation No. 8 of 2016, the PPP Availability Payment scheme is a periodic payment scheme made by Ministers/Heads of Institutions to Business Entities for the availability of infrastructure services in accordance with the quality and/or criteria as specified in the PPP agreement. The terms of the availability payment project are no revenue derived from service users, the project is not financially feasible or the infrastructure is free of user fees. In the availability payment scheme, the business entity is responsible for the planning, design, construction and maintenance of infrastructure assets and the government is responsible for regular payments. The availability payment scheme is generally used for vital and strategic infrastructure projects such as toll roads, highways and power plants.

One of the most challenging things in public-private partnerships in the provision of infrastructure is the effectiveness of project preparation and arrangement of projects so that they are creditworthy. Institutional investors will look for long-term infrastructure investment opportunities, but many project plans have not been pursued. The reason for this paradox is the gap in project preparation. Many projects are poorly prepared, non-creditworthy where investors do not have sufficient confidence in commercial and technical feasibility, risk allocation, private commitment and capacity, and institutional and legal framework. In addition, public acceptance of PPP projects can be encouraged through more effective communication about the benefits of PPPs and the relevance of PPPs to social and economic development as well as the introduction of positive elements that accompany project implementation (World Economic Forum, 2013). One of the payment options that can attract potential investors in a PPP is the availability payment mechanism. In this mechanism, the concession period and

payment for service availability are important parameters.

There is a hybrid model that allows the public sector to set payment limits for the availability of services and the length of the concession period which can be used as a reference in the PPP project tender (Wang, Love & Davis, 2012). The PPP model with availability payment services continues to be used in infrastructure financing in both developed and developing countries. This model was developed to assess the financial feasibility of a PPP project in terms of availability payments or service availability. This model can be used to perform a sensitivity analysis of the financial feasibility of a proposed PPP project (Mladenovic, 2014). The public sector bears 100% of the demand risk in the availability payment scheme, the public sector will rely heavily on a performance management system based on the achievement of key performance indicators (KPIs) to ensure the private partners provide optimal performance during infrastructure operation and maintenance.

In terms of attracting private interest in the PPP Availability Payment scheme, the government must create a conducive environment for PPP implementation. In the context of infrastructure provision in Indonesia, several areas of commitment have been identified that need improvement: policy continuity, financial transparency and fighting corruption (Wibowo & Alfen, 2015). The government plays an important role in the success of infrastructure development with the PPP scheme. The government's contribution begins with creating a conducive investment climate and preparing projects appropriately to attract private sector investment. There are 5 (five) most important factors related to this, namely adequate legal basis, irrevocable contracts, measurable and reasonable risk sharing, clear coordination mechanisms and strong political support (Wibowo & Alfen, 2015).

### **C. Critical Success Factor**

Critical Success Factors are several important areas that can ensure the success of an institution or project if available (Kwak et al., 2009) and can cause project failure if not taken seriously (Ngiri, 2012). CSFs are defined as 'the few major areas of activity in which profitable results are absolutely necessary for a manager to achieve his goals' (Rockart, 1982). CSF is also considered as a performance indicator in implementing PPP projects, because CSF is needed to achieve value for money that cannot be obtained through traditional financial means (Macario, 2013). Over the years so far, the topic of CSF for PPP projects has been of interest to many researchers. As a result, many studies from various countries have identified and classified various CSFs.

The CSF approach is to separate areas that are very important in project management to achieve success (Jefferies, 2006). This concept focuses on areas where positive results are very important by the organization in an efficient and effective way to achieve its goals (MIT CISR, 2014). A previous study conducted by Ameyaw and Chan (2016) offers a valuable theoretical framework for examining

the influential factors behind the success of an infrastructure PPP project. They identified five critical success factors (CSFs): partner commitment; consortium power; asset quality; political environment and the national PPP unit.

Although many CSFs for PPP projects have been identified and evaluated in previous studies, the frequency and importance of these CSFs varies from project to project, country to country and even within the same PPP project, depending on the circumstances (Hemming et al., 2006).

### **D. Financial Close on PPP Projects**

Financial close refers to the final stage of the procurement phase where the PPP contract has been signed, all preconditions for financing are met and financing is available so that the private sector can start construction (Global Infrastructure Hub, 2022). According to EY (2015) in international project financial transactions, the general definition of financial close is when the project document has been signed and the preliminary conditions have been met or waived. Loan withdrawals will then be permitted. Preliminary terms are conditions/things that must be handled before the lender allows the borrower to withdraw the loan. They will be listed in the loan agreement and PPP agreement.

In implementing financial close on PPP projects in Indonesia according to Bappenas (2022), after signing the agreement, the project company must be able to secure project funding. This must be obtained within no more than 12 months after signing the agreement and can be extended from time to time if the failure to obtain funding is not caused by the negligence of the executing business entity. Any extension granted for financial close may not exceed six months. Financial close can also be carried out in stages according to the project cycle and the agreement between the SPC and the Government Contracting Agency.

## **III. METHODS**

This research will use mixed methods, namely combining quantitative and qualitative methods. The goal of this approach is to gain a comprehensive and in-depth understanding of the research topic as well as provide evidence to support the research findings. In this study, a sequential mixed methods strategy will be used, especially a sequential exploratory strategy. Cresswell (2010) suggests that this type of strategy involves first collecting qualitative data through interviews, followed by collecting quantitative data through surveys. In addition, according to Cresswell (2010), a sequential exploratory strategy involves collecting and analyzing qualitative data first, followed by collecting and analyzing quantitative data in the second stage based on the findings of qualitative data analysis in the first stage.

The research process begins with identifying the issues being discussed, then continues with reviewing and analyzing existing literature. After that, the researcher identified the variables involved in the research. After the variables are obtained, the researcher formulates a hypothesis

that serves as a guide in developing the questionnaire and selecting the sample.

The independent variable (X) in this study is a factor that influences the planning stage (X1) and project preparation stage (X2), while the dependent variable (Y) is the success of the KPDBU availability payment in Indonesia. The hypotheses in this study are: H1: factors at the project planning stage influence the success of the KPDBU availability payment project in Indonesia; H2: factors at the project preparation stage influence the success of the availability payment KPDBU project in Indonesia; H3: factors at the planning and project preparation stages have a partial and simultaneous effect on the success of the KPDBU availability payment project in Indonesia.

Data collection methods used in this research are: (a) interviews; (b) questionnaire; and (c) literature study. Data analysis techniques using: (a) descriptive analysis; (b) multiple linear regression analysis; and (c) test the regression model simultaneously (f test) and partially (t test).

#### IV. RESULT AND DISCUSSION

##### A. Interview Results

Based on the results of the interviews conducted, there were several points of similarity conveyed by the sources as well as several different points. The similarities and differences in the points conveyed by the interviewees will be explained in each interview question.

**Question 1.** Why does the Madiun Public Street Lightning project use the PPP scheme?

- i. PPP as an alternative financing scheme for providing infrastructure is expected to be able to accelerate the development of quality, effective, efficient, right-on target and timely infrastructure. PPP as a potential solution for infrastructure implementation. APBN and APBD cannot meet all the needs for infrastructure procurement, so alternative financing is needed.
- ii. Budget limitations, with a limited budget get greater benefits and more certain realization.
- iii. The investment value of the Madiun Public Street Lightning project is not large, but has many benefits such as better street lighting, reduced accident rates, longer working hours for the community, encouraging local government economic growth, attracting investors to invest in Madiun.
- iv. Time efficiency in using the PPP scheme. With the PPP scheme, Madiun Public Street Lightning can be built in about 3 years, if using a conventional financing scheme, Madiun Public Street Lightning can only be realized in about 40-50 years in the future.
- v. Quality of service that will be maintained during the project cooperation period.
- vi. Proportionate risk allocation between the government and business entities.
- vii. Attract investors in investing.

**Question 2.** What are the keys to success in the Madiun Public Street Lightning PPP project in achieving the first financial closing in Indonesia?

- i. Adequate GCA understanding of PPP projects
- ii. GCA's commitment to the PPP project in the process, budgeting and support.
- iii. Complete Madiun Regency Institutions, consisting of PPP Nodes, Public Street Lightning PPP Team and Procurement Committee.
- iv. Coordination with stakeholders.
- v. Compatibility of the project structure with respect to regulations with the ability of the project owner including mature and adequate project planning, supporting regulations, project bankability, availability of clean and clear land, project licensing, availability of regional capacity, readiness of human resources and monitoring and evaluation.
- vi. Harmonization of regional apparatus.
- vii. Harmonization between the executive and the legislative.

**Question 3.** What are the obstacles or challenges in the Madiun Public Street Lightning PPP project process?

- i. Madiun Street Lightning is a PPP with the first availability payment scheme, so a comprehensive discussion is needed in the process so that it has an impact on the process and time.
- ii. Regulation, consideration of the specified time. The government is still figuring out the right system, while investors need a more comprehensive evaluation.

**Question 4.** What is the role of stakeholders in the Madiun Public Street Lightning PPP project?

- i. National Development Planning Agency has the role of facilitating the preparation of OBC documents, assisting Regional Governments in providing PPP understanding, and providing access to Regional Governments regarding the procurement of consultants.
- ii. The Ministry of Finance has a role to provide support in the form of a project development facility (PDF) to make it bankable, viability gap funding (VGF) to support project feasibility, and provide input regarding fiscal and budget capacity.
- iii. Ministry of Home Affairs: assistance and consideration of the availability payment value, and providing input for regional fiscal capacity with the master plan.
- iv. The Ministry of Transportation issued a letter of dispensation to comply with Minister of Transportation Regulations No. 27 of 2018 concerning street lighting equipment, as well as approval for the management of street lighting equipment on National/Arterial Roads.
- v. The Ministry of Investment/BKPM has a role in the socialization or market sounding process.
- vi. National Public Procurement Agency/ LKPP has a

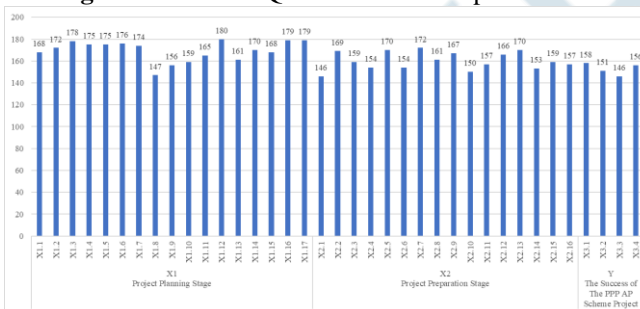
- role in supporting the preparation of documents and the implementation of the procurement of Public Street Lighting PPP Implementing Business Entities.
- vii. The Madiun Regency DPRD has a role in approving the availability payment value and the Public Street Lightning PPP regulation, supporting the APBD allocation for the availability payment.

**Question 5.** How is the continuity of comfort and security in investing in the Madiun Public Street Lighting PPP project?

- i. Certainty to invest in PPP projects is safe enough, because there are already regulations governing each stage of the project as well as legally binding documents. The PPP cooperation agreement and support from the DPRD is a form of document that has legal force.
- ii. Indonesia Infrastructure Guarantee Fund (IIGF) will guarantee the political risks and risks promised by the GCA as stated in the cooperation agreement from the beginning to the end of the project cooperation period. The guarantee is in the form of fulfilling the availability payment obligations, as well as the potential for project termination.

**B. Questionnaire Data Collection Results**

**Figure 1** Research Questionnaire Recapitulation



source: 2023 research survey results

Based on the results of the questionnaire survey above, on variable X1 (project planning stage), question X1.12 (availability of land for the construction of PPP infrastructure projects) has the highest score of 180 points, followed by question X1.16 (availability of organized and committed government institutions) and X1.17 (availability of a professional PPP team and a well-organized PPP node to oversee the implementation of project planning) with a score of 179 points each, while question X1.8 (there is community support which will be seen from development infrastructure) has the lowest score of 147 points.

In variable X2 (project preparation stage), question X2.7 (feasibility study has identified the best form of PPP project) has the highest score of 172 points, followed by questions X2.5 (GCA's understanding of the concept and preparation of the PPP project) and X2.13 (appropriate risk allocation between public and private parties) with a score of 170 points each, while question X2.1 (project preparation is carried out

by the GCA by employing a preparation agency) has the lowest score of 146 points. In variable Y (PPP availability payment scheme project success), question X3.1 (regulations, institutions, business processes) has the highest score of 158 points.

**C. Correlation Test**

**Table 1** Correlation Test

		The Success of The PPP AP Scheme Project	Project Planning Stage	Project Preparation Stage
Pearson Correlation	The Success of The PPP AP Scheme Project	1.000	.233	.604
	Project Planning Stage	.233	1.000	.273
	Project Preparation Stage	.604	.273	1.000
Sig. (1-tailed)	The Success of The PPP AP Scheme Project		.083	.000
	Project Planning Stage	.083		.051
	Project Preparation Stage	.000	.051	
	The Success of The PPP AP Scheme Project	37	37	37
	Project Planning Stage	37	37	37
	Project Preparation Stage	37	37	37

source: data processing using SPSS, 2023

Based on the table above, the correlation value of variable X1 to Y is 0.233, while the correlation value of variable X2 to Y is 0.604.

**D. Multiple Linear Regression Analysis**

Aims to see the correlation between the independent variable and the dependent variable.

**Table 2 R-Square Adjusted**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.608 <sup>a</sup>	.370	.333	8.483752

a. Predictors: (Constant), Project Preparation Stage, Project Planning Stage

source: data processing using SPSS, 2023

The R correlation value has a value range of 0 - 1. The table above shows the R correlation value = 0.608. This shows that the correlation between variables X1 (Project Planning Stage) and X2 (Project Preparation Stage) has a fairly close relationship. The R Square correlation value shows the number 0.370, this indicates that the variables X1 (Project Planning Stage) and X2 (Project Preparation Stage) have an effect of 37%, while the other 63% are influenced by variables that are not contained in this model.

#### E. F Test

The multiple linear regression hypothesis for the f test is as follows.

H0 = variable X1 (project planning stage) and X2 (project preparation stage) together have no effect on variable Y (success of the PPP AP scheme project in Indonesia)

H1 = variable X1 (project planning stage) and X2 (project preparation stage) jointly affect variable Y (success of the PPP AP scheme project in Indonesia)

**Table 3 F Test**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1436.27	2	718.137	9.978	.000 <sup>b</sup>
Residual	2447.11	34	71.974		
Total	3883.39	36			

a. Dependent Variable: The Success of The PPP AP Scheme Project in Indonesia

b. Predictors: (Constant), Project Preparation Stage, Project Planning Stage

source: data processing using SPSS, 2023

Based on the anova table above, the Sig. value is 0.000, then H0 is rejected, H1 is accepted. This shows that variable X1 (project planning stage) and variable X2 (project preparation stage) together influence variable Y (the success of the PPP AP scheme project in Indonesia).

#### F. T Test

Next, it is tested whether each independent variable has an effect on the dependent variable by conducting a t test. Before doing the t test, first look at the coefficients to be able to get a multiple linear regression equation.

**Table 4 T Test**

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	-2.461	11.281			-.218	.829
Project Planning Stage	.106	.205	.073		.517	.608
Project Preparation Stage	.797	.193	.584		4.127	.000

a. Dependent Variable: The Success of The PPP AP Scheme Project in Indonesia

source: data processing using SPSS, 2023

Explanation:

a. The constant a is -2.461, meaning that if the variable project planning stage (X1) and project preparation stage has a value of 0, then variable Y (PPP availability payment project success) has a value of -2.461.

b. The regression coefficient value of the project planning stage variable (X1) is positive, namely 0.106, meaning that for every 1 unit increase in the project planning stage, the project success is predicted to increase by 0.106 units.

c. The regression coefficient value for the project preparation stage (X2) is positive, which is equal to 0.797, meaning that for every 1 unit increase in the project preparation stage, the success of the project is predicted to increase by 0.797 units.

d. In the variable coefficients table X1 obtains a sig. of 0.608, then H0 is accepted, which means that the variable X1 (project planning stage) partially does not affect the success of the PPP project availability payment.

e. In the variable coefficients table X2 obtains a sig. is 0.000, then H0 is rejected, which means that the variable X2 (project preparation stage) partially affects the success of the PPP project availability payment.

#### G. Effective Contribution and Relative Contribution

Based on the results of the analysis that has been done before, it has obtained the value of the regression coefficient, correlation coefficient and R-square value which can be seen in the following table.

**Table 5 Effective Contribution and Relative Contribution**

No.	Variable	G. Effective Contribution (%)	Relative Contribution (%)
1	Project Planning Stage	1.70	4.60
2	Project Preparation Stage	35.27	95.40

source: data processing using SPSS, 2023

Based on the relative contribution value above, it is obtained that the relative contribution value of X1 is 4.60% and X2 is 95.40%. This result can be interpreted that the project preparation stage (X2) has an influence on the success of the PPP project by 95.40%, while the project planning

stage (X1) has an influence value of 4.60% on the success of the PPP project.

#### H. Critical Success Factors

The main points from the interview results as described in the previous sub-chapter, then the writer will identify according to the research variables. The results of the identification show the main points in the interview on the question of critical success factors. There are 5 critical success factors identified based on the results of interviews with research informants.

**Table 6** Critical Success Factors

No.	Critical Success Factors	Respondents
1	Adequate GCA understanding of PPP projects	N1, N4
2	GCA's commitment to the PPP project	N2, N3
3	Complete Madiun Regency Project Institution	N2, N4
4	Coordination with stakeholders.	N1, N2, N3, N4
5	Suitability of the project structure to regulations with the ability of the project owner	N1, N2

source: 2023 research survey results

#### I. The Role of Stakeholders

The role of stakeholders in the Madiun Public Street Lightning project can be mapped based on the results of interviews conducted on interview question number 4, namely "What is the role of stakeholders in the Madiun Public Street Lightning PPP project?".

**Table 7** The Role of Stakeholders

No.	Stakeholders	Role
1	National Development Planning Agency	a. Facilitate preparation of OBC documents b. Assist the Regional Government in providing an understanding of PPP c. Providing access to the Regional Government regarding the procurement of consultants
2	Ministry of Finance	a. Provide support in the form of a project development facility (PDF) b. Providing support in the form of viability gap funding (VGF) c. Provide input regarding fiscal capacity and budget
3	Ministry of Home Affairs	a. Assist and consider the value of availability payment b. Provide input for regional fiscal capacity with the masterplan
4	Indonesia Infrastructure Guarantee Fund (IIGF)	a. Guarantee the project from political risk which is the risk contained in the cooperation agreement from the beginning to the end of the project cooperation

No.	Stakeholders	Role
		period b. Guarantee the fulfillment of the availability payment obligations and the potential for project termination
5	Ministry of Transportation	Provide letter of dispensation to fulfill Minister of Transportation Regulations No. 27 of 2018 concerning street lighting devices
6	The Ministry of Investment/BKPM	Socializing the project or market sounding
7	National Public Procurement Agency/ LKPP	Support the preparation of documents and the implementation of Public Street Lighting PPP Implementing Business Entities
8	Governor of East Java	Consider the availability payment value
9	Political Rights and Association of Madiun Regency	a. Approved the availability payment value and the KPDBU regulation for public street lighting b. Support APBD allocation for payment of availability payment
10	Provincial Government of East Java	Provide support related to the fiscal capacity of the Regional Government in accordance with the masterplan

source: 2023 research survey results

## V. CONCLUSION AND RECOMMENDATION

Based on the results of the analysis of interviews, questionnaires and literature studies, Critical Success Factors for the Implementation of PPP (Local Government Collaboration with Business Entities) for the Public Street Lighting Project in Madiun Regency in Reaching the First Financing Fulfillment Stage in Indonesia, the following conclusions are obtained.

1. The project planning stage and the project preparation stage simultaneously influence the success of the PPP Availability Payment project.
2. The project preparation stage is the most influential factor in the PPP Availability Payment project success stage of 95.40%, while the project planning stage has an influence value of 4.60%.
3. Critical success factors for the implementation of the PPP Public Street Lighting Project in Madiun Regency to the stage of financing fulfillment are (a) Adequate GCA understanding of the PPP project; (b) GCA's commitment to the PPP project; (c) Complete project institutionalization (d) Coordination with stakeholders; and (e) Conformity of the project structure to regulations with the ability of the Project owner.
4. The roles of stakeholders at PPP in the Madiun Public Street Lighting project in achieving the first financing fulfillment stage in Indonesia are:

- a. Ministries/Institutions: have a role as a regulator that regulates the relationship between the Regional Government and Business Entities, as well as a role as a facilitator providing support to the Regional Government in the context of providing infrastructure.
- b. Local Government or GCA: has a role as a decision maker in the Madiun Public Street Lighting PPP project.
- c. Business Entity: has a role as an investor, as well as an operator in a PPP project. Business entities contribute to the financing, planning, implementation and operation of PPP projects.
- d. Communities: have a role as service recipients. Community involvement and participation is important to gain support and in order to provide infrastructure according to community needs.
- e. Financial Institution: has a role as a lender, facilitates investment and provides financial solutions to support and sustain projects.
- f. Project Guarantor Institution: has an obligation to guarantee the project both in terms of availability payment installments, as well as in terms of political risks such as the change of Regional Head.

Some suggestions that can be conveyed in this study for the success of the PPP project for public street lighting projects are as follows.

1. It should be noted that before applying to PPP Availability Payment projects for other public street lighting, these critical success factors are analyzed from the Madiun public street lighting project. Each project is unique, which means that this research can be used as a reference or reference provided that attention is paid to the issues and problems in each project.
2. It is necessary to optimize the preparation of pre-feasibility study documents, because these documents play an important role in the PPP Availability Payment project in clearly identifying the best form of PPP, revenue structure and PPP project finance.
3. It is necessary to provide clear understanding to the Cooperation Project Responsible Person regarding the PPP Availability Payment project and strong coordination with relevant stakeholders, because the GCA has an important role in the PPP Availability Payment project.

It is necessary to conduct other research at the implementation stage so that the PPP Availability Payment

project for other public street lighting can run smoothly from the initial stage to the end of the project collaboration, because this research focuses on examining critical success factors in the implementation of the PPP Availability Payment for the Madiun public street lighting project to financing fulfillment stage.

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