

To cite this article: Iris Mahani, Rizal Z. Tamin, Rani G. Pradoto, Meifrinaldi, Putri N. K. Whardani, Yongki A. Tanne, and Kevin A. Hartono (2022). A STUDY ON THE APPLICATION OF AVAILABILITY PAYMENT SCHEME FOR URBAN INFRASTRUCTURE IN INDONESIA, International Journal of Education and Social Science Research (IJESSR) 5 (5): 91-104 Article No. 669, Sub Id 1071

## A STUDY ON THE APPLICATION OF AVAILABILITY PAYMENT SCHEME FOR URBAN INFRASTRUCTURE IN INDONESIA

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DOI: <http://dx.doi.org/10.37500/IJESSR.2022.5506>

### ABSTRACT

The Government of Indonesia encourages the implementation of central and regional infrastructure through Public Private Partnership (PPP) which is regulated by Presidential Regulation no. 30/2015. One of the financing schemes in PPPs is the availability payment (AP), namely periodic payments by the Regional Head to the Implementing Business Entity for the availability of infrastructure services in accordance with the quality and/or criteria as determined by the PPP Agreement (Minister of Finance Regulation No. 260/PMK.08/2016). The AP scheme can be an alternative for PPP projects that are not feasible in terms of user payments because they do not depend on demand. AP is considered still difficult to implement in Indonesian PPPs because it is constrained by various things that need to be evaluated. Through a descriptive narrative approach based on literature review and case surveys, this research analyzes the keys to success, constraints, and recommendations for implementing AP in urban infrastructure in Indonesia. Case studies were conducted on several regional PPP projects in 8 districts/cities in Indonesia that use the AP and user payment schemes, where projects will be compared and evaluated based on the keys to the success of the AP to map constraints and their mitigation. The identification results obtained 13 AP success criteria which are grouped into regulation, institution, and business process aspects. The failure of AP compared to user payments in regional PPP projects is caused by the absence of regional PPP implementation and technical guidelines, the absence of approval from the DPRD and weak coordination with the regional government, the immature experience and preparation of the regional government, and the unpreparedness of regional PPP institutions. The recommendations proposed are the implementation of socialization of PPPs in the regions by the central government, increased coordination between the Regional Government and the DPRD, mature and complete preparation of regional PPP projects, and the implementation of regional PPP capacity building in improving the experience of regional governments.

**KEYWORDS:** Availability Payment, Indonesia, Urban Infrastructure, Public Private Partnership

## 1. INTRODUCTION

The Government of Indonesia continues to encourage the implementation of infrastructure through Public Private Partnership (PPP), especially in economic and social infrastructure. Based on Presidential Regulation No. 30/2015, PPPs are not only carried out for the central government but also for regional governments. Contractors, consultants, and investors began to shift to the private sector to help the government serve the community, with the hope of obtaining: tax revenue, better performance, employment, and the cost of infrastructure implementation from the private sector. With this condition, the government will gain several advantages including: less need for government employees in the long term, private participation, infrastructure development directly to investors and can be done with availability payment.

Availability Payment (AP) is a periodic payment by the Minister/Head of Institution/Head of Region to the Implementing Business Entity for the availability of infrastructure services in accordance with the quality and/or criteria as determined by the PPP Agreement (Regulation of the Minister of Finance No. 260/PMK.08/2016). PPP project financing with the AP scheme in the regions has also been regulated in the Minister of Home Affairs Regulation No. 96/2016. AP is a payment method for performance produced by a Business Entity without depending on demand, so that the Business Entity will receive a predetermined payment according to its performance when the asset is fully operational. If the Business Entity's performance is not in accordance with the agreement, the payment will be reduced.

Mladenovic and Queiroz [1] have assessed this alternative financing through availability payments, from several examples of cases in the United States related to PPP agreements with user payments, many of the private sector went bankrupt due to lower income than anticipated. Therefore, this supports the private sector's interest in switching to availability payments on the grounds that the public sector shifts demand risk away from the private sector. If demand is very uncertain and revenue from user fees is difficult to predict, then compared to user pay, it is better to use an availability payment scheme [2].

In Indonesia, the implementation of availability payments is still considered difficult to implement, because there are several obstacles including not getting approval from the Regional House of Representatives (DPRD), as well as the condition of regional institutions and regulations that are not ready to support the implementation of regional PPPs [3]. In addition, Tanne [4] states that there is still a need for a common perception of income from infrastructure operations; involvement of investors/private parties who have experience with AP schemes; attention to environmental factors; regional head political policies based on long-term needs; commitment from government employees to implement the AP scheme; comprehensive public consultation; and the involvement of the DPRD from the start. Therefore, the implementation of the availability payment financing scheme has an urgency to be studied as input for the government in improving the PPP system in Indonesian urban areas.

In Indonesia, there are 514 districts/cities that always rely on government funding sources for infrastructure development. The current state of the Government's financial budget is quite limited, this is shown in the National Medium-Term Development Plan (RPJMN) 2020-2024, that the government is only able to fund 40% of the infrastructure budget, and the rest is very dependent on business entities. Of the 514 districts/cities in Indonesia, there are only 8 cities that have prepared regional PPPs for public street lighting (PJU), health facilities, and drinking water supply systems (SPAM). These cities include: Bandar Lampung, Semarang, Surakarta, Sidoarjo, Medan, Pekanbaru, Bekasi, and Bandung. Of these 8 cities, there are several projects that are planned to use the AP funding scheme, including Krian Hospital in Sidoarjo, Public Street Lighting (PJU) in Bandung and Surakarta, but unfortunately these projects have not been implemented properly and are in danger of failing. Therefore, this research aims to analyze the keys to success, evaluate constraints, and provide recommendations for implementing availability payment in urban infrastructure in Indonesia.

## 2. LITERATURE REVIEW

According to the World Bank [5], there are 5 (five) reasons for the use of PPPs including: (1) Introducing technology and private sector innovation in providing better public services through increasing operational efficiency; (2) Incentivize the private sector to deliver projects on time and within budget; (3) Ensuring budget certainty by setting current and future costs of infrastructure projects; (4) Increasing the limited capacity of the public sector to meet the growing demand for infrastructure development; and (5) Extracting long term value for money through appropriate risk transfer to the private sector over the life of the project from design/construction to operation/maintenance.

Maramis [6] examines the determinants of the success of PPP implementation, which consist of: the comprehensive capability of the government's PPP, institutions within the PPP, attractive rewards for private parties, legal certainty, and opportunistic behavior. Meanwhile, Li et al (2003) stated that the five success factors of PPP scheme are: (1) Good financial arrangements; (2) Flexible and innovative contracts; (3) Sharing of responsibilities and taking risks; (4) Credibility and transparency; and (5) Mutually beneficial goals. The PPP policy in Indonesia has been initiated since 1998, the implementation of which has faced various obstacles, including issues of project preparation that are not credible enough, political risk is too high, or the project's financial feasibility is marginal. Therefore, various efforts have emerged to support PPPs such as government guarantees, project preparation facilities (PDF), project feasibility support funds (VGF), and other supporting facilities/institutions. The PPP policy in Indonesia has been initiated since 1998, the implementation of which has faced various obstacles, including issues of project preparation that are not credible enough, political risk is too high, or the project's financial feasibility is marginal. Therefore, various efforts have emerged to support PPPs such as government guarantees, Project Development Facilities (PDF), Project Viability Gap Fund (VGF), and other supporting facilities/institutions.

Infrastructure development requires high investment costs and long payback periods. This makes it difficult to increase the role of the private sector in investing in infrastructure development without the support of the public sector. To provide certainty of return on private investment, one form of infrastructure financing that can be done through the PPP scheme is availability payment. According to Dochia & Parker [7], availability payment or service availability is a payment for performance where the calculation is independent of the number of requests or services of an infrastructure, so that no payments are made by service users. The amount of periodic payments consists of components of construction costs (capital expenditure), operations and maintenance (operating expenditure) and a reasonable profit margin (return on investment).

Availability payments can be an attractive alternative for financing and project delivery for projects that are not feasible or are recommended to be implemented by user payment, for example for policy reasons, public perception and/or profitability. Meanwhile, according to Giglio and Friar [8], availability payment is a project payment for performance that is carried out without considering the demand factor where there is pure availability (e.g. usable paths) and constructive availability (e.g. safe, clean, well-lit). In the AP scheme, it takes the commitment of the Government (project person in charge) to allocate payments in budget execution documents that focus on the availability of services, so that risks to construction and operation and maintenance of assets are the responsibility of the business entity. An effective AP mechanism needs to integrate performance specifications according to standards, key performance indicators (KPIs), and contract monitoring.

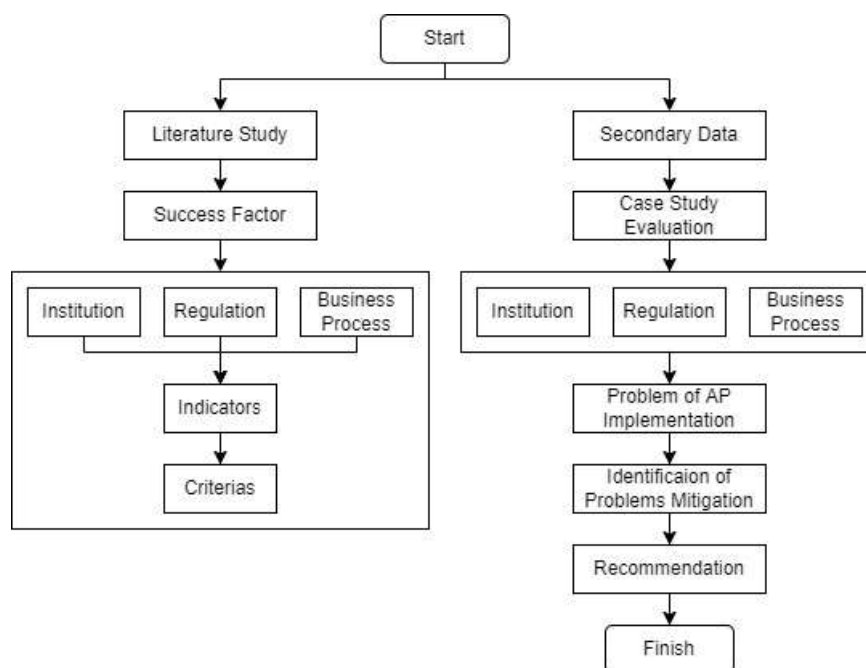
The study conducted by Dochia and Parker [7] stated the important benefits obtained from the availability payment scheme as follows: (1) There is a guarantee due to the certainty of the long term budget; (2) Payment only starts at the start of the operation; (3) The private sector focuses on meeting the specified service standards; (4) Maintenance and renewal of future capital and replacement are fully financed; (5) Payments may not be viewed as debt by public entities; (6) Private cash flows are more stable than user fees. According to Lawther and Martin [2], ideally the best practices found in the performance management system should be reflected in specific availability payment contracts managed by private partners, and the contract should specify the following provisions: (1) Performance measurement indicators of private partners; (2) Mechanism or process of collecting and evaluating performance data; (3) Standards for evaluating actions and applying penalties and/or incentives; and (4) Amount of payments and mechanisms resulting from performance, including penalties for not meeting the identified standards. According to Mladenovic & Queiroz [1], when implementing an availability payment scheme, the government must realize that the AP scheme creates future responsibilities for the government, and therefore limits its future resources to invest in other necessary projects.

When the main purpose of a PPP is to obtain additional funds for those available in the state budget, or to spend limited public funds to be used on other infrastructure facilities (e.g secondary and rural roads), availability payment is not a viable option. However, when the "user pays" type of project is

not feasible (eg due to the inability of users to pay, or an unfavorable political environment), then availability payment may be the only viable solution. Availability Payment is also preferred for projects where user payments are not available (e.g schools, hospitals, prisons, etc). Based on a study conducted by Suhendra [9], there are five key factors for the successful implementation of availability payment as follows: (1) Commitment of the Responsible Person for Cooperation Projects (PJKP); (2) Government guarantees that provide certainty of investment returns for investors; (3) Coordination among Stakeholders; (4) PJKP's fiscal capacity; (5) Establishment of the Public Service Agency (BLU).

### 3. METHODOLOGY

This research was conducted through a narrative descriptive approach based on literature review and surveys through primary and secondary data. The research is based on case studies of several cases of implementation of availability payments that have been successfully implemented and those that have not been successfully implemented in Indonesian urban infrastructure. The application of availability payment is a public policy which is defined as norms that support government actions in the juridical area [10]. Public policy can also be seen as a process and see the process in a simple model to be able to understand the constellation between actors and the interactions that occur in it. In this definition, the main aspects of public policy are institutions, regulations and business processes. The analysis is carried out through several case studies in Indonesia, both failed projects and successful projects, then an analysis of the causes of success and failure will be carried out in terms of institutions, regulations and business processes. The stages of this research can be seen in the flow chart below.



#### 4. DATA AND ANALYSIS

##### 4.1 Success Keys PPP Implementation and Availability Payment

Based on several literature reviews, several criteria for the successful implementation of PPP and AP were identified. These criteria are further grouped into regulatory, institutional and business process aspects. The results of the process of identifying and grouping criteria can be seen in the table below.

**Table 1: Availability Payment Scheme Success Key**

Aspects	Criteria	Lawther & Marten [2]	Suhendra & Satrio [9]	Dochia & Parker [7]	Li, et. al [11]	Maramis [6]	Availability Payment PPP
Regulation	Legal Certainty	√				√	√
	Flexible & Innovative Contracts			√	√	√	√
	Government Commitment		√	√			√
Institution	PPP Institution		√			√	√
	Government Comprehensive Capability					√	√
	Coordination between Stakeholders		√				√
	Government Fiscal Capacity		√		√		√
Business Process	Measurable Performance Indicators	√		√			√
	Clear Payment Mechanism	√		√			√
	Risk Allocation	√			√		√
	Credibility and Transparency	√			√		√
	Mutually Beneficial Goals	√		√	√	√	√
	Return Guarantee		√				√

##### 4.2 Case Studies

Several cases of PPP projects in Indonesia that use the availability payment (AP) financing scheme in this study are as follows:

1. Public Street Lighting (PJU) in Bandung
2. Public Street Lighting (PJU) in Surakarta
3. Regional General Hospital (RSUD) Krian in Sidoarjo

Because the analysis is based on regulatory, institutional, and business process aspects, secondary data collected includes: regulations related to the project, the responsible person for cooperation project (PJK), related supporting institutions, contract value, and the payment process. The results of secondary data collection for the three PPP projects under the AP scheme can be seen in the table below

**Table 2: Case Study of PPP Project with Availability Payment**

No.	Project Name	Year	Supporting Regulations	PJK	Supporting Institution	Project Value	PPP Scheme	Description
1	Public Street Lighting (PJU) in Bandung	2017	Mayor of Bandung Decree No.119/2017 concerning Appointment of the Bandung City Secretary as Regional PPP Node Mayor of Bandung Decree No.800/2017 concerning Regional PPP Teams in Providing Bandung City PJU Infrastructure	Mayor of Bandung	Regional PPP Node, Regional PPP Team	Rp. 1 Trillion (Tentative)	Availability payment	Failed, because the city government's annual obligation is considered too expensive and does not get approval from the DPRD
2	Public Street Lighting (PJU) in Surakarta	2019	Surakarta City Regulation No. 4/2020 concerning regional PPPs in the Provision of Surakarta City PJU Services	Mayor of Surakarta	Regional PPP Team, PJU Procurement Committee, and Regional PPP Agreement Control Team	Rp. 383-555 Billion	Availability payment with guarantee	Failed, because it was judged that the preparation was too hasty, the study was not in-depth, the municipal government had an annual obligation for 15 years, and it was considered a burden on regional finances.

3	Regional General Hospital in Krian, Sidoarjo	2019		Regent of Sidoarjo		Rp. 250 Billion	Availability payment with guarantee	Failed, because the obligation of the Regency Government per year is considered too expensive and only approved by 1 faction in the DPRD
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From the case study above, it can be observed that the three PPP projects with availability payment financing failed, so it is said that the application of AP to urban infrastructure has so far not been successful in Indonesia. As a comparative study, case studies were also conducted on PPP projects with user payment financing, the majority of which were carried out using the Build-Operate-Transfer scheme in Drinking Water Supply System (SPAM) projects in a number of cities, and the following results were obtained:

**Table 3: Case Study of PPP Project with User Payment**

No.	Project Name	Year	Supporting Regulations	PJPK	Supporting Institution	Project Value	PPP Scheme	Description
1	Bandar Lampung City SPAM	2018	Regional Regulation of Bandar Lampung City No. 2/2014 concerning Cooperation between the City Government of Bandar Lampung and Business Entities in the Development of SPAM	Director of Regional Drinking Water Company (PDAM) Bandar Lampung	Supervision team, project implementer	Rp. 1.324 Trillion with a PPP value of Rp. 485 Billion	SBOT user payment, with feasibility support (VGF), preparation and transaction facilities (PDF), a business plan from the Ministry of Finance; construction of distribution lines from the Ministry of PUPR & infrastructure guarantee.	In operation stage; enter the National Strategic Project; 25 years concession period
			Regional Regulation of Bandar Lampung City No.10/2016 concerning Amendment to Regional Regulation of					



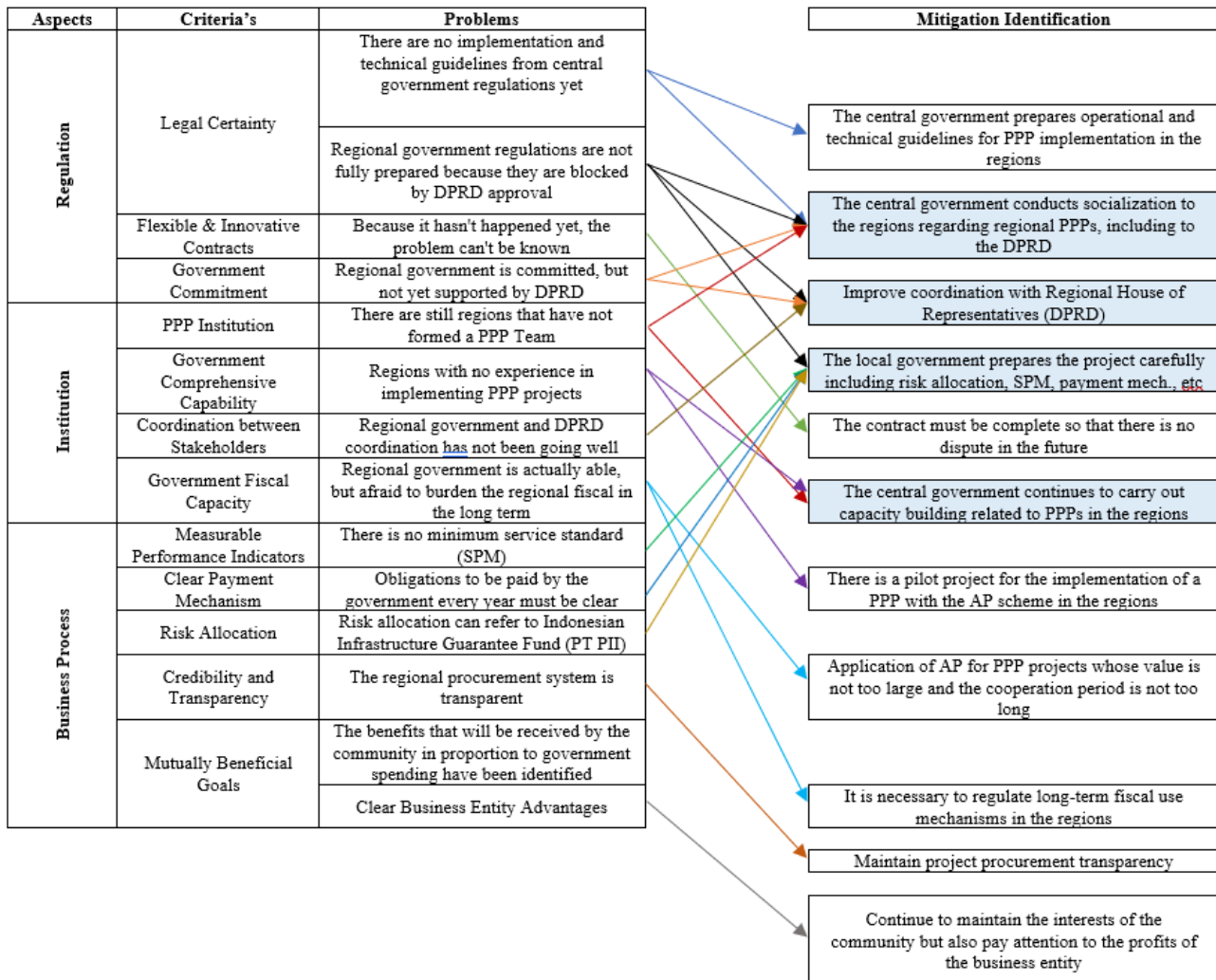
			Semarang City No.2/2014					
2	Semarang City SPAM	2019	Semarang City Regional Regulation No. 8/2018 concerning regional PPPs in the Implementation of West Semarang SPAM	Director of Regional Drinking Water Company (PDAM) Semarang	Regional PPP Nodes, Coordination Team, Regional PPP Team, Procurement Committee and Monitoring Team	Rp. 1.19 Trillion with a PPP value of Rp. 417 Billion	SBOT user payment, with the support of land acquisition, VGF, and tax incentives, as well as infrastructure guarantee.	In operation stage; 25 years concession period
3	Pekanbaru City SPAM	2019	Pekanbaru City Regional Regulation No. 9/2019 concerning Pekanbaru City SPAM Management and Procurement	Director of Regional Drinking Water Company (PDAM) Pekanbaru	Regional PPP Nodes, Coordination Team, Regional PPP Team, Procurement Committee and Monitoring Team	Rp. 500 Billion	SBOT user payment, with guarantee and support for land acquisition, equity participation, and VGF	Under construction stage

All three SPAM projects with user payment PPP schemes are considered to have been successfully built without serious obstacles, and several have been operating commercially. This comparison shows that there are problems in the implementation of PPPs with availability payments, so that further evaluation will be carried out between the PPP success criteria for the AP scheme and the existing case study data. Evaluation is carried out based on each indicator which is a detail of the previously described success criteria, so that various problems that occur in its implementation can be identified. The assessment of each indicator was taken based on secondary data and the results of the Focus Group Discussion (FGD) conducted by the researcher with the City/District Government, the Regional Development Planning Agency (Bappenas), the Ministry of Finance, and the Indonesian Infrastructure Guarantee Fund (PT. PII). The evaluation results are grouped based on the location of the three PPP projects under the AP scheme which can be seen in the table below.

Aspects	Criterias	Indicators	Evaluation Result		
			Bandung	Surakarta	Sidoarjo
<b>Regulation</b>	Legal Certainty	Readiness of central government regulations	It's quite complete, but there are no implementation and technical instructions yet		
		Readiness of regional government regulations	Up to mayor level	There are already regional regulations	Not available
	Flexible & Innovative Contracts	Clear rights and responsibilities	Not available		
		Efficient and practical	Not available		
	Government Commitment	Central	Have committed		
		Regional	Regional government is committed, but not supported by DPRD	Already available	Regional government is committed, but not supported by DPRD
<b>Institution</b>	PPP Institution	Central	Already available		
		Regional	Already available	Already available	Not available
	Government Comprehensive Capability	Central	The central government has experience in PPPs with user payments with the BOT/SBOT scheme, but only a few for AP		
		Regional	Not experienced in organizing PPP projects		
	Coordination between Stakeholders	Regional Government and Regional House of Representatives (DPRD)	Regional government and DPRD coordination has not been going well	There has been coordination between Regional government and DPRD	Regional government and DPRD coordination has not been going well
		Regional Government and Central Government	Coordinate quite well		
		Central Government	Already available	Already available	Already available

	Government Fiscal Capability	Regional Government	Yes, but it is felt that it will burden the next government period		
<b>Business Process</b>	Measurable Performance Indicators	Minimum service standards (SPM) are part of the contract	Not set yet	Not set yet	Not set yet
	Clear Payment Mechanism	Obligations that the government must pay every year must be clear	Yes, but it's too expensive	Not set yet	Yes, but it's too expensive
	Risk Allocation	The risk allocation between the Cooperation Project Manager (PJK) and the Business Entity must be clear	Can refer to the Indonesian Infrastructure Guarantee Fund (PT PII)		
	Credibility and Transparency	Transparent procurement process	The regional procurement system is transparent		
		Prioritizing Business Entity Innovation	Has not happened		
	Mutually Beneficial Goals	The benefits that will be received by the community are proportional to government spending	Already identified		
Clear Business Entity Advantages		Already predicted			

The results of the evaluation process obtained several obstacles that caused availability payments could not be implemented. Then identification and mapping of mitigation that can be done for each problem can be seen in the table below.



### 4.3 Discussion

Based on the previous study, it can be formulated obstacles to the implementation of availability payments in the implementation of urban infrastructure PPPs in Indonesia, including:

1. The central government has not yet compiled implementation instructions and technical guidelines for implementing regulations related to PPPs in city/district, so that regional governments find it difficult and are afraid to make mistakes, while the central government feels it is not necessary.
2. Regional governments have begun to prepare for the implementation of PPPs in the regions, but have not yet received approval from the Regional House of Representatives (DPRD) for several reasons including: the price is becoming more expensive and will burden the region's long-term fiscal.

3. The central government already has a lot of experience implementing PPPs but with the Build-Operate-Transfer (BOT) scheme (the AP scheme does not yet exist), while regional governments do not yet have experience in implementing PPPs in the regions.
4. PPP institutions at the central government have indeed been prepared, while regional PPPs are still not ready.
5. Coordination between regional government and DPRD is still weak.
6. The regional government has not yet fully prepared PPPs in the regions, for example related to minimum service standards (SPM), risk allocation, contract contents, etc.

Based on the results of the problem analysis, several main mitigations are recommended to resolve these obstacles, including:

1. The central government should socialize the benefits and implementation of PPP systems in the regions, including to the DPRD.
2. Regional governments should improve coordination with various stakeholders in PPP implementation, including with DPRD.
3. Regional government and PPP team should prepare the regional PPP projects thoroughly and completely, so that there will be no dispute in the future.
4. Due to the inexperience of regional government capacity in PPP implementation, it should be improved by providing capacity building by the central government.

## 5. CONCLUSION

1. The keys to the successful implementation of PPPs with the availability payment scheme are grouped into three aspects, namely: regulation (legal certainty, flexible and innovative contracts, and government commitments), institutions (PPP institutions, coordination between stakeholders, and the government's comprehensive and fiscal capacity), and business processes (measurable performance indicators, clear payment mechanisms, risk allocation, credibility and transparency, mutually beneficial goals, and guaranteed returns).
2. The implementation of the availability payment scheme for urban infrastructure PPPs in Indonesia is still failing compared to user payments that are running well. The failure of AP in the regions is caused by several obstacles, namely: the absence of implementation and technical guidelines for PPP in the city/district area, the absence of approval from the DPRD and weak coordination with the Regional Government, the lack of experience and preparation of the Regional Government thoroughly, and the regional PPP institutions are not yet ready.
3. The recommendations proposed in increasing the success of the implementation of the availability payment scheme for urban infrastructure PPPs in Indonesia include: the implementation of socialization of PPPs in the regions by the central government, increased coordination between the Regional Government and DPRD, mature and complete preparation of regional PPP projects, and implementation of capacity building Regional PPPs in improving regional government experience.

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