



Post-Financial Close Management Of Public-Private Partnership And Build-Operate-Transfer Contracts In Supporting The Achievement Of Sustainable Development Goals

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ABSTRACT

Public-Private Partnership (PPP) and Build-Operate-Transfer (BOT) schemes have been positioned by the United Nations as strategic instruments to achieve the Sustainable Development Goals (SDGs), particularly SDG 9 on Industry, Innovation and Infrastructure, SDG 11 on Sustainable Cities and Communities, SDG 16 on Peace, Justice and Strong Institutions, and SDG 17 on Partnerships for the Goals. Indonesia faces an infrastructure investment need of IDR 10,303 trillion for the 2025-2029 period, making PPP and BOT schemes vital instruments. However, the success of long-term infrastructure projects is not only determined by initial planning and financing but is also highly dependent on contract management after financial close. This article analyzes global best practices in PPP and BOT contract management based on a study of more than 250 infrastructure projects and 25 case studies from various countries, integrating the People-First PPP paradigm developed by UNECE as a bridge between contract management and SDG achievement. The research employs a qualitative method with normative and comparative approaches, supported by semi-structured interviews with three officials and PPP project consultants. The results indicate that 45 percent of global PPP contracts undergo renegotiation before their tenth year, while Indonesia still faces challenges in dual land rights, the absence of professional contract management units, and the weak integration of SDG indicators in post-contract performance evaluation. By reviewing the Indonesian legal framework and comparing it with international practices in Colombia, South Africa, and the United Kingdom, this article formulates five SDG-based strategic recommendations to strengthen the governance of partnership-based infrastructure projects.



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INTRODUCTION

Public infrastructure development has become a national priority in many countries, including Indonesia, as a prerequisite for driving economic growth and improving social welfare. The positioning of infrastructure as a global development priority is affirmed in the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 as part of the 2030 Agenda (Supriani et al., 2024). SDG 9 explicitly states the commitment to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation (Mulyana & Subarsyah, 2024). SDG 11 emphasizes the development of inclusive, safe, resilient, and sustainable cities and communities (Susanto et al., 2023). SDG 17 places multi-stakeholder partnerships as the principal means of implementation for achieving all SDGs, including through the mobilization of financial resources from the private sector (Farquharson, E. et al. 2011).

During the 2025 to 2029 period, the Government of Indonesia requires an infrastructure investment of IDR 10,303 trillion, equivalent to USD 617 billion, to achieve the target of 8 percent

economic growth, with 70 percent projected to come from the government and 30 percent from the private sector (Farquharson, E. et al. 2011). This figure represents a 66 percent increase compared to the 2014 to 2024 period which recorded an investment of IDR 6,203 trillion, meaning that annual infrastructure investment must be tripled compared to the previous period (Maruf et al., 2023). The Public-Private Partnership (PPP) and Build-Operate-Transfer (BOT) schemes provide opportunities for synergy between the public and private sectors in financing, building, and managing infrastructure to address this funding challenge (Ito, S. 2020). Within the SDG context, PPPs play a dual role as financing instruments and as governance mechanisms that can ensure the infrastructure built provides sustainable benefits to society (Nor et al., 2023).

The World Bank (2017) defines PPP as a long-term contract between a private party and a government entity for providing a public asset or service in which the private party bears significant risk and management responsibility, and remuneration is linked to performance (Shylepnytskyi, P., et al. 2022). This definition places PPPs as more complex instruments than ordinary procurement contracts. However, the traditional PPP paradigm focused on value for money and risk transfer began to shift in 2016 when the United Nations Economic Commission for Europe (UNECE) issued the Draft Guiding Principles on People-First Public-Private Partnerships for the UN Sustainable Development Goals (Shylepnytskyi, P., et al. 2022). UNECE introduced the People-First PPP paradigm that places people as the principal priority and beneficiary of all stakeholders in a PPP (Kusmiadi et al., 2025).

Although PPPs have become a policy choice in various countries, the main attention is often focused on the planning and initial financing phases, while contract management after financial close is often neglected. Heathcote (2019) in the foreword of the Global Infrastructure Hub report emphasizes that without effective management of a contract after financial close, there is significant risk that even the best projects can end badly (Abdullah et al., 2024). Data from the Global Infrastructure Hub (2019) shows that 45 percent of global PPP contracts undergo renegotiation by their tenth year after financial close, almost 20 percent experience renegotiation in the fourth year, and 17 percent encounter disputes within the first four years (Rahayu & Susanto, 2025). These statistics indicate that post-financial close contract management is a critical juncture that determines not only the technical and financial success of a project but also the achievement of the SDG objectives that constitute the rationale for infrastructure development (Hatta et al., 2025).

Indonesia has a relatively comprehensive regulatory framework for PPP schemes through Presidential Regulation Number 38 of 2015 on Government Cooperation with Business Entities in Infrastructure Provision (Government of the Republic of Indonesia, 2015), reinforced by Minister of Finance Regulation Number 68 of 2024 (Ministry of Finance of the Republic of Indonesia, 2024). For the BOT scheme involving regional government assets, Government Regulation Number 28 of 2020 regulates the Build-Operate-Transfer and Build-Transfer-Operate variants (Government of the Republic of Indonesia, 2020). Anggraeni and Sari (2020) note that the complexity of interrelations among regulations within KPBU has the potential to create implementation problems. Meanwhile, the Government of Indonesia has integrated the SDGs into the National Medium-Term Development Plan through Presidential Regulation Number 59 of 2017 on the Implementation of the Achievement of Sustainable Development Goals (Anggraeni, R., & Sari, I. M. (2020).

This article aims to fill the knowledge gap on post-financial close management of PPP and BOT contracts through literature review and global best practices, placing the analysis within the framework of SDG achievement (Maruf et al., 2025). In the context of development law, long-term contract management reflects the dynamics between rule of law, good governance, and the achievement of sustainable development. This research adopts an interdisciplinary approach combining public contract law, new institutional theory as developed by North (1990), the value for money approach as formulated by Yescombe (2011), and the People-First PPP paradigm from UNECE (2018) as the operational bridge between contract management and SDG achievement (Anggraeni, R., & Sari, I. M. (2020).

RESEARCH METHODOLOGY

This research employs a qualitative method with normative and comparative approaches. The normative approach is used to analyze the legal framework governing PPP and BOT in Indonesia as

well as the SDG framework at the international level, while the comparative approach is used to compare contract management practices across jurisdictions. Secondary data is obtained from official documents of the Global Infrastructure Hub (2019, 2022), World Bank (2017), Asian Development Bank (2022), UNECE (2018, 2020), Indonesian national regulations, and relevant scholarly literature from 2017 to 2026.

Primary data is collected on a limited basis through semi-structured interviews with three informants consisting of an official from the Directorate General of State Assets Ministry of Finance, an official from the National Development Planning Agency, and a senior PPP project consultant who has experience handling State-Owned Enterprises. The interviews were conducted in July 2025 with informant anonymity consent. The selection of the three informants is based on the consideration of perspective triangulation, namely the perspective of the state asset manager, the project planner, and the field implementer.

The analytical technique used is content analysis on regulatory documents and literature, combined with the case study approach to extract concrete lessons from specific projects. International case study sources refer to 25 selected projects from the Global Infrastructure Hub spread across five continents as well as projects evaluated by UNECE using the People-First PPP methodology. System comparison is conducted among contract management practices in Colombia, South Africa, and the United Kingdom, compared with Indonesia. This research employs SDG mapping to identify the linkage of each contract management dimension with the relevant SDG goals.

CONCEPTUAL AND THEORETICAL FRAMEWORK

Public-Private Partnership and the People-First PPP Concept

The World Bank (2017) formulates PPP as a long-term contract between a private party and a government entity for providing a public asset or service in which the private party bears significant risk and management responsibility, with remuneration linked to performance. Yescombe (2011) further explains that PPP is a long-term contract between a public authority and a private company in which risk and management responsibility are significantly transferred to the private sector. The main characteristics of PPP include a long duration of generally 20 to 30 years, risk allocation, private sector financing, and the linkage of remuneration to service performance.

The People-First PPP or PfPPP paradigm developed by UNECE shifts the focus of PPP from mere value for money to SDG achievement (UNECE, 2018; UNECE, 2020). Bach (2016) as the former Executive Secretary of UNECE emphasizes that for many years PPP was a narrow financial model for transferring project risk to the private sector and was not viewed as a development model, but rather as a value-for-money alternative to traditional public procurement (Ma, M., 2022). Wang (2022) confirms that this new paradigm encompasses five outcomes that must be achieved by PPP projects, namely improved access to essential services and the reduction of social inequality, improved economic effectiveness and fiscal sustainability, enhanced environmental sustainability and resilience, the promotion of replicability and the development of future projects, and the assurance of broad stakeholder engagement. These five criteria directly correspond to several SDGs simultaneously.

In the Indonesian context, Presidential Regulation Number 38 of 2015 defines KPBU as cooperation between the government and business entities in the provision of infrastructure for public interest based on an agreement between the two parties, taking into account the principle of risk sharing (Government of the Republic of Indonesia, 2015). This definition positions KPBU as an alternative financing instrument but has not yet explicitly integrated the People-First PPP principle. King and Wood Malleons (2025) notes that Indonesia's PPP regulatory framework provides legal flexibility and openness to foreign investment without strict restrictions.

Financial Close

Financial close is the point at which the contract is signed, financing is available, and the project can commence. Global Infrastructure Hub (2018a) explains that financial close refers to the moment when lenders are satisfied that the conditions precedent have been met and funds become available. This point represents the transition from procurement to implementation and marks the beginning of the true contract management responsibility. Surachman et al. (2021) describe the dynamics of KPBU

project preparation in Indonesia which places financial close as an important milestone requiring multi-party coordination.

Build-Operate-Transfer

BOT is a scheme in which the private sector builds, operates, and transfers the asset to the government after a specified period. BOT is a specific form of PPP, particularly for greenfield projects. In Indonesia, Government Regulation Number 28 of 2020 recognizes the term Build-Operate-Transfer (BGS) defined as the utilization of state or regional government property in the form of land by another party by constructing buildings and facilities, which are then operated for a specified period, and subsequently returned to the government after the period ends (Government of the Republic of Indonesia, 2020). Another variant regulated in the same regulation is Build-Transfer-Operate (BSG).

Sustainable Development Goals as a Framework of Objectives

The Sustainable Development Goals or SDGs are a global development agenda adopted by all member states of the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. The SDGs consist of 17 main goals with 169 specific targets that are interconnected. In the context of PPP and BOT, four SDGs have the most direct linkage. SDG 9 on Industry, Innovation and Infrastructure targets the development of quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human welfare. SDG 11 on Sustainable Cities and Communities targets universal access to housing, basic services, and safe, affordable, and sustainable transport systems.

SDG 16 on Peace, Justice and Strong Institutions targets the development of effective, accountable, and inclusive institutions at all levels, which is a prerequisite for good PPP contract management. SDG 17 on Partnerships for the Goals explicitly mentions PPP as an instrument to mobilize financial and technical resources for the achievement of other SDGs. In addition to these four main SDGs, specific infrastructure projects also contribute to SDG 6 on Clean Water and Sanitation, SDG 7 on Affordable and Clean Energy, and SDG 13 on Climate Action. Wang (2022) positions the instrumentality of PPP in achieving SDGs as a rapidly growing research issue in the sustainable development literature (Ma, M., 2022).

Theoretical Framework

This study draws on four theoretical foundations. First, the New Institutional Theory developed by North (1990) emphasizes the importance of institutional structures in maintaining the sustainability of long-term public contracts. Second, the Value for Money principle as formulated by Yescombe (2011) as the basis for efficiency in public procurement. Third, the Theory of Administrative Contract Law which emphasizes relational symmetry and mechanisms for public protection. Fourth, the People-First PPP paradigm from UNECE (2018) which integrates social, environmental, and governance dimensions into the PPP analytical framework. These four theoretical foundations complement each other in analyzing the effectiveness of PPP and BOT contract management in achieving the SDGs.

MAIN FINDINGS

The Urgency of Post-Financial Close Contract Management for SDG Achievement

The analysis shows that many project failures are caused by weak monitoring after financial close. Global Infrastructure Hub (2019) notes that excessive focus on the procurement and initial negotiation stages often overlooks the complexity of long-term implementation. The case study of the Gautrain Rapid Rail Link in South Africa shows that constraints such as delays in land acquisition or licensing conflicts can damage project success and reduce the project's contribution to SDG 11 on sustainable transport. Land access is a particular challenge for linear projects such as roads, railways, and transmission networks (Global Infrastructure Hub, 2018a).

From the SDG perspective, the failure of post-financial close contract management has layered impacts. Technical and financial failures reduce the direct contribution to SDG 9 on quality infrastructure. Prolonged disputes and renegotiations erode trust in public-private partnerships as instruments for achieving SDG 17. Patu and Akhmadi (2021) in their evaluation of the preparation of the Makassar-Parepare Railway KPBU project found that the gap in technical capacity at the level of the Project Implementation Authority was the main obstacle to implementation, simultaneously

weakening the achievement of SDG 16 on effective institutions. North (1990) emphasizes that transaction costs in the implementation phase of long-term contracts often far exceed the costs of initial negotiation, so institutional capacity becomes a determinant of success.

Establishment and Training of SDG-Oriented Contract Teams

Contract management teams must be established before financial close with a composition that includes project managers, legal experts, technical experts, and financial experts. Global Infrastructure Hub (2018a) recommends that governments need to consider various aspects in determining the size and expertise of the contract management team. Within the People-First PPP paradigm, UNECE (2020) recommends that contract management teams also be equipped with the capacity to evaluate projects based on SDG indicators. The People-First PPP Evaluation Methodology for SDGs launched by UNECE in December 2020 provides benchmarks and indicators that demonstrate achievement in the five PfPPP outcomes, a weighting and ranking system, and a scoring system to help governments and partners revise projects to be more aligned with the SDGs.

Practices in China and Colombia show that joint training between public and private teams enhances the effectiveness of contract management because it builds a shared understanding of performance expectations and dispute resolution mechanisms. Indonesia's experience through PT Penjaminan Infrastruktur Indonesia (2025) as the single window for government guarantees shows a positive initiative in capacity building, but it is still limited to the guarantee aspect and has not fully integrated the SDG dimension in contract management team training.

Transition Management and Monitoring Based on SDG Indicators

Global Infrastructure Hub (2019) identifies three important transition phases in the PPP life cycle, namely the transition from financial close to construction, from construction to operation, and from operation to handover or handback. Each phase requires documentation planning, transition checklists, and a monitoring system based on Key Performance Indicators including availability, reliability, quality, and safety indicators. Within the People-First PPP paradigm, these indicators need to be expanded with indicators aligned with the SDGs, including access and equity for SDG 1, SDG 5, and SDG 10, economic effectiveness and fiscal sustainability for SDG 8 and SDG 9, environmental sustainability and resilience for SDG 6, SDG 11, SDG 13, and SDG 15, replicability for SDG 9, and stakeholder engagement for SDG 16 and SDG 17 (UNECE, 2020).

Good transition management requires systematic documentation so that institutional knowledge is not lost when personnel or consultants change. The case study of the Intercity Express Programme in the United Kingdom provides the lesson that knowledge transfer becomes crucial when the government replaces a technical consultant midway through a project (Global Infrastructure Hub, 2019). Parikesit et al. (2024) in their study of the modernization of toll road transaction systems in Indonesia found that technology transitions in ongoing PPP projects require an adaptive regulatory approach to accommodate innovation without disrupting existing contractual rights.

Dispute Resolution and Renegotiation

Data from the Global Infrastructure Hub (2019) shows that approximately 45 percent of projects undergo renegotiation before the tenth year, with almost 20 percent experiencing renegotiation in the fourth year. The high rate of renegotiation reflects the nature of PPP as a living contract that must adapt to social, legal, and economic dynamics, including changes in SDG commitments. Global Infrastructure Hub (2018b) adds that PPP contracts lasting 20 to 30 years are inherently vulnerable to changes in technology and social priorities such as views on climate change and sustainability, which aligns with SDG 13.

Early warning systems, mediation, and good faith negotiation approaches are important to prevent escalation to arbitration that is costly and time-consuming. Global inflation triggered by geopolitical conflict during the 2022 to 2024 period adds urgency to the economic rebalancing mechanism in PPP contracts (Dewulf, G., & Garvin, M. J. (2020)). In the Indonesian context, Tania (2023) shows that renegotiation in the form of majority share transfer of the implementing business entity has the potential to create implications for the aspect of business competition. Fair and transparent dispute resolution mechanisms directly support the achievement of SDG 16 on access to justice and effective institutions.

MAPPING PPP CONTRACT MANAGEMENT TO THE SDGs

To provide a systematic analytical framework, Table 1 maps the dimensions of post-financial close PPP contract management with the relevant SDGs based on the People-First PPP paradigm of UNECE (2018, 2020) and the global practices documented by the Global Infrastructure Hub (2019).

Table 1. Mapping of PPP Contract Management Dimensions to the SDGs

Contract Management Dimension	SDGs Supported	Contribution Mechanism
Establishment of a professional contract management team	SDG 16, SDG 17	Building effective and accountable institutions and strengthening multi-stakeholder partnerships
Service performance monitoring based on KPIs	SDG 9, SDG 11	Ensuring quality infrastructure and reliable public services for society
Management of construction-operation-handback transition	SDG 9, SDG 12	Maintaining infrastructure sustainability and responsible consumption and production practices
Dispute resolution and renegotiation mechanisms	SDG 16	Ensuring access to justice and legal certainty for the parties
Public engagement and transparency	SDG 11, SDG 16, SDG 17	Building inclusive and accountable cities and strengthening public participation
Integration of environmental and climate considerations	SDG 6, SDG 13, SDG 15	Ensuring water sustainability, climate resilience, and ecosystem protection
Mainstreaming equitable access to services	SDG 1, SDG 5, SDG 10	Reducing poverty, inequality, and gender disparity through fair access to services

Source: Adapted from UNECE (2018, 2020), Global Infrastructure Hub (2019), and Wang (2022)

INDONESIAN LEGAL FRAMEWORK: CHALLENGES AND POTENTIAL

Indonesia has formally recognized BOT since 1995, and through Government Regulation Number 28 of 2020, the concepts of Build-Operate-Transfer and Build-Transfer-Operate have been implemented more operationally (Government of the Republic of Indonesia, 2020). Meanwhile, Presidential Regulation Number 38 of 2015 serves as the legal umbrella for the KPBU scheme covering various forms of PPP (Government of the Republic of Indonesia, 2015). Anggraeni and Sari (2020) identify that the material content of Presidential Regulation Number 38 of 2015 has comprehensively regulated the aspects of planning, preparation, transaction, and asset management of KPBU.

Indonesia has also integrated the SDGs into the national policy framework through Presidential Regulation Number 59 of 2017 on the Implementation of the Achievement of Sustainable Development Goals. This regulation establishes the institutional framework, roadmap, and national action plan for SDG achievement. However, the integration between SDG policies and PPP regulations has not been optimal. Maulana (2021) emphasizes that understanding the planning and preparation stages is a particular challenge at the regional government level due to limited access to training and mentoring, so that SDG indicators rarely become explicit reference points in KPBU project evaluation.

The strengthening of the legal framework occurred in 2024 with the issuance of Minister of Finance Regulation Number 68 of 2024 on Government Support for Infrastructure Financing through the Public-Private Partnership Scheme (Ministry of Finance of the Republic of Indonesia, 2024). This regulation revokes ten previous Minister of Finance Regulations and integrates the provisions regarding Government Support, Pre-Project Development Facility, Project Development Facility, Infrastructure Guarantee, and Viability Gap Fund within a single legal instrument. This regulatory consolidation is a strategic step to simplify and provide legal certainty for investors, while potentially accelerating the achievement of SDG 9 through the acceleration of infrastructure projects.

Implementation challenges still exist in four main dimensions. First, the dualism of land rights between the Right of Management (HPL) and the Right of Use which often creates legal uncertainty in

the status of the BOT object. Second, the absence of professional contract management units in most ministries, agencies, and regional governments, which hinders the achievement of SDG 16. Third, the weakness of the post-contract performance monitoring and evaluation system which often relies only on the periodic and non-real-time audit by the Supreme Audit Agency. Fourth, the absence of systematic integration of SDG indicators into PPP project performance evaluation, which hinders the mainstreaming of the People-First PPP paradigm in national practice.

Relevant Case Studies from Global Practices

Four case studies from the Global Infrastructure Hub (2019) provide concrete lessons relevant to Indonesia. Table 2 presents a summary of the lessons from each case study with the relevant SDG dimensions.

Table 2. Global PPP Case Studies and Their Linkages with the SDGs

Country	Project	Key Lesson	Related SDGs
South Africa	Gautrain Rapid Rail Link	Resolution of land issues before financial close to prevent cost escalation	SDG 9, SDG 11
Belgium	Brabo 1 Light Rail	Public stakeholder management is crucial for urban transport	SDG 11, SDG 17
United Kingdom	Intercity Express Programme	Knowledge transfer when consultant changes occur	SDG 9, SDG 16
Colombia	Barranquilla Airport	Post-financial close assistance by the initial tender team	SDG 9, SDG 16
Brazil	Nova Ceasa Market	Transformation of a food market into an economically, socially, and environmentally sustainable facility	SDG 2, SDG 8, SDG 11

Source: Adapted from Global Infrastructure Hub (2019), UNECE (2020), and UN Sustainable Development Group (2021)

The Nova Ceasa project in Brazil received the UNECE 2021 Building Back Better Infrastructure Award for transforming an aging food supply market into an economically, socially, and environmentally sustainable facility (UN Sustainable Development Group, 2021). This case study demonstrates how the People-First PPP paradigm can be concretely applied to medium-scale projects that directly impact the livelihoods of communities.

Comparison of Global and Indonesian Practices

Table 3 presents a systematic comparison of PPP contract management practices in the United Kingdom, Colombia, and Indonesia across six main dimensions, including SDG integration.

Table 3. Comparison of PPP Contract Management Practices and SDG Integration

Dimension	United Kingdom	Colombia	Indonesia
Dedicated Contract Unit	Available, regionally based	Available through ANI and PMU	Not yet equally distributed
National Contract Guide	Contract Management Manual	National checklist	Not yet available
Performance Monitoring System	Digital dashboard and audit	Service-based KPIs	BPK audit, not real-time
Role of Public Stakeholders	Involved from the outset	Mandatory public consultation	Rarely conducted formally
SDG Integration in Evaluation	Explicit in the Green Book	Adopted in the ANI framework	Not yet systematic
People-First PPP Adoption	In the adoption process	Pilot in several projects	Not yet adopted

Source: Adapted from Global Infrastructure Hub (2019), World Bank (2017), UNECE (2020), and Asian Development Bank (2022)

Multi-Stakeholder Coordination Challenges

The analysis of practices in Indonesia reveals four patterns of coordination challenges among stakeholders. First, the central government tends to focus on the financing aspect and the initial tender with inadequate attention to long-term contract management and the integration of SDG indicators. Second, regional governments are constrained by limitations in human resources capacity and coordination with central ministries and agencies. Third, State-Owned Enterprises and the private sector often complain about regulatory uncertainty and policy changes that cause transaction costs to rise. Verico et al. (2024) argue that to build infrastructure that supports inclusive economic development as targeted by SDG 8 and SDG 10, coordination among stakeholders must be designed from the outset with clear mechanisms.

Fourth, society as the end user of services is minimally involved in service evaluation, even though PPP directly targets public needs. Farquharson et al. (2011) emphasize that the systematic involvement of stakeholders from the early stages is a prerequisite for the success of PPP in emerging markets. UNECE (2020) places stakeholder engagement as one of the five main outcomes of People-First PPP, so the absence of systematic public participation in Indonesia weakens the contribution of PPP to SDG 16 and SDG 17.

Interviews and Field Experience

An interview with an official from the Directorate General of State Assets revealed that not all ministries and agencies have specialized units that understand the dynamics of contract management after financial close, even though this is precisely the period when risks emerge (DGSA Official, personal communication, July 15, 2025). This statement is reinforced by the senior PPP consultant who states that regional governments often only rely on the tender team and then lose control after the project commences (Senior PPP Consultant, personal communication, July 20, 2025). Studies on Colombia and South Africa show that project success is strongly supported by the existence of permanent contract units with sustainable funding and training (Global Infrastructure Hub, 2019).

CONCLUSION

Conclusion

The success of PPP and BOT is not determined solely by contract design and initial financing. The post-financial close period is precisely the real indicator of the success of public services, investment efficiency, and the achievement of the Sustainable Development Goals. The research findings show that Indonesia needs institutional reform and the strengthening of long-term contract governance to address the infrastructure investment need of IDR 10,303 trillion during the 2025 to 2029 period while supporting the achievement of SDG 9, SDG 11, SDG 16, and SDG 17. The data from the Global Infrastructure Hub (2019) showing that 45 percent of projects undergo renegotiation before the tenth year and 17 percent experience disputes within the first four years should serve as an alarm for Indonesia to prepare adequate institutional capacity.

The People-First PPP paradigm developed by UNECE (2018, 2020) provides a relevant conceptual framework for integrating the SDGs into PPP contract management. The five main outcomes of People-First PPP, namely access and equity, economic effectiveness and fiscal sustainability, environmental sustainability and resilience, replicability, and stakeholder engagement, directly correspond to various SDGs. The comparison with practices in the United Kingdom, Colombia, and South Africa shows that Indonesia is still in four crucial aspects, namely the existence of permanent contract management units, the availability of a national contract management guide, real-time dashboard-based performance monitoring systems, and the integration of SDGs into PPP project performance evaluation.

SDG-Based Recommendations

Based on the analysis above, this research formulates five strategic recommendations explicitly oriented toward SDG achievement. First, establishing permanent PPP contract management units at both central and regional levels with adequate organizational structure, funding, and authority, as an instrument for achieving SDG 16 on effective institutions. This unit can be designed as a development

of PT Penjaminan Infrastruktur Indonesia or as a separate body with a specific mandate for contract management. Second, developing a national contract management framework equipped with checklists and Standard Operating Procedures for transitions at every phase of the contract life cycle, by integrating the People-First PPP Evaluation Methodology for SDGs from UNECE (2020) as an instrument for achieving SDG 9 and SDG 11.

Third, conducting periodic training based on real cases for government officials handling PPPs, by integrating modules on SDG indicators and the People-First PPP paradigm. This training needs to cover technical, legal, financial, risk management, and sustainable impact evaluation aspects, as an instrument for achieving SDG 4 on quality education and SDG 16. Fourth, mandating public consultation and the periodic publication of PPP project performance through a publicly accessible dashboard, as an instrument for achieving SDG 16 on access to information and SDG 17 on multi-stakeholder partnerships. This dashboard must display SDG achievement indicators for each PPP project.

Fifth, encouraging research and the involvement of academics in PPP project evaluation to build an empirical knowledge base that becomes a policy reference, with a special focus on measuring the contribution of PPP projects to the SDGs. Academic research can serve as an independent assurance of the SDG contribution claims made by PPP projects, while also strengthening public accountability. The consistent implementation of these five recommendations is expected to strengthen the governance of partnership-based infrastructure projects in Indonesia, so that public and private investment not only produces physical infrastructure but also contributes meaningfully to the achievement of the Sustainable Development Goals and the national economic growth targets.

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