



## Procurement Maturity Reimagined: A Conceptual Model for Regional Owned Enterprises (BUMDs)

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### ARTICLE INFO

*Keywords:* Procurement Maturity Model, BUMD, Hybrid Governance, Public Procurement, Institutional Reform

*Received :* 5 February

*Revised :* 23 March

*Accepted:* 23 April

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### ABSTRACT

Procurement plays a strategic role in the governance of Badan Usaha Milik Daerah (BUMD) or Regional-Owned Enterprises, which operate under dual mandates: public accountability and business efficiency. Existing procurement maturity models often fall short in addressing the hybrid nature of BUMDs. This study develops the BUMD Procurement Maturity Model (BPMM) through a conceptual synthesis of 42 public, private, and hybrid models. The BPMM comprises five dimensions—regulatory governance, institutional capacity, human capital development, digital integration, and strategic procurement—each progressing through five maturity levels from reactive to transformative. The model serves as both a diagnostic tool and a roadmap for institutional reform. It enables BUMDs to assess capabilities, address governance gaps, and implement procurement strategies aligned with local regulations and market needs. The BPMM also contributes to procurement theory by introducing a hybrid-specific maturity framework adaptable to decentralized public enterprises

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## **INTRODUCTION**

Public procurement plays an exceptionally strategic role in the governance and performance of Regional-Owned Enterprises or Badan Usaha Milik Daerah (BUMD). As business entities owned by local governments, BUMDs are mandated not only to generate financial returns but also to provide public services in an efficient and accountable manner. This dual mandate gives rise to institutional complexity, requiring BUMDs to integrate principles of public governance – such as transparency, compliance, and equity – with private-sector managerial dynamics that emphasize efficiency, competitiveness, and operational flexibility (Potage, 2017).

As hybrid organizations, BUMDs inherently face structural tensions. On one hand, they must adhere to public norms and oversight mechanisms that prioritize procedural accountability and regulatory compliance. On the other, they are expected to swiftly respond to market dynamics, make agile decisions, and adapt to competitive pressures. When the public logic and business logic are not harmonized within a mature procurement framework, the result may be organizational inefficiencies, misallocation of budgets, and project implementation failures (Hua, 2022; Prier et al., 2012).

This issue becomes increasingly critical as the number and economic contributions of BUMDs continue to grow. According to data from the Ministry of Home Affairs (2023), there are more than 1,100 BUMDs operating across Indonesia, spanning strategic sectors such as water supply, energy, finance, trade, property, and transportation. Of these, over 400 are categorized as active and healthy, with the majority concentrated in clean water provision through regional water utilities (PDAM). The scale and sectoral diversity of these enterprises position BUMDs as key actors in public procurement, thereby reinforcing the urgency for a procurement system that aligns with their unique institutional characteristics.

Beyond these structural tensions, another critical challenge faced by BUMDs is the absence of a standardized national procurement framework. Unlike ministries and local government units governed by Presidential Regulation No. 16 of 2018 and its technical guidelines, BUMDs operate within highly variable policy environments. Their procurement arrangements are often left to the discretion of local executives or company directors, leading to regulatory fragmentation and disparities in governance capacity across regions (Sutisna, 2024). This lack of standardization directly affects procurement quality, processing speed, and integrity at the regional level.

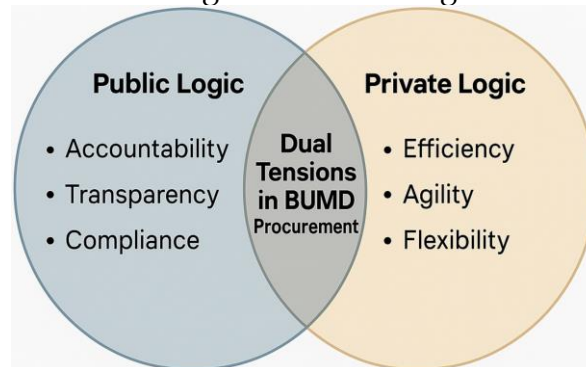
Globally, a number of procurement maturity models – such as OECD's MAPS, MSU+, Indonesia's IPM2, as well as PMM and SMMM – have made significant contributions to the reform of both public and private procurement systems. These models provide structured pathways to help organizations transition from reactive systems to professional, value-generating practices (Paiva & Vieira, 2024; Batenburg & Versendaal, 2008). However, most existing frameworks are not sufficiently contextualized for hybrid entities like BUMDs. Public-sector models tend to be overly normative and bureaucratic, while private-sector models prioritize competition and profit-maximization. Hybrid

models are emerging in sectors like health and education, yet they remain generic and are not specifically tailored to the institutional structures and mandates of BUMDs (Maran & Lowe, 2022; Suliantoro et al., 2022).

The absence of a framework capable of capturing the governance complexity of BUMDs highlights a significant theoretical and methodological gap in the procurement literature. To address this void, this study proposes the development of an integrative and adaptive procurement maturity model that is specifically tailored to the institutional configurations and operational needs of BUMDs. The proposed framework synthesizes elements from public, private, and hybrid procurement models into five core dimensions: regulatory and procedural governance, institutional structure, human capital capability, digital integration, and strategic procurement orientation. The model serves a dual function: as a diagnostic tool to assess current procurement maturity, and as a roadmap for reform toward a more professional, accountable, and sustainable system.

This study is expected to fill a conceptual gap in the development of procurement systems relevant to hybrid organizations such as BUMDs – an area that has received limited attention in the procurement governance literature. Additionally, the proposed framework holds practical value as a reference for policymaking, institutional capacity development, and procurement system enhancement at the regional level. Through its contextual and multidimensional approach, this study also contributes to the advancement of hybrid organizational theory and expands the understanding of procurement governance within the interface between public and private sectors.

Figure 1. Venn Diagram or Dual-Logic Tension Map



## LITERATURE REVIEW

### Procurement Maturity and its Strategic Role

Procurement maturity refers to the degree of institutional advancement an organization has achieved in designing, managing, and optimizing its procurement functions systematically and sustainably. Unlike procurement performance, which focuses on outputs—such as cost savings, timeliness, or quality of outcomes—procurement maturity reflects the structural, procedural, and strategic readiness that underpins such performance.

Conceptually, procurement maturity encompasses five core attributes:

- a. Policy and procedural framework, referring to the existence of internal regulations, standard operating procedures (SOPs), and technical guidelines that are documented, consistently applied, and periodically updated.
- b. Institutional arrangements, including the structure of procurement units, clearly defined procurement authorities and responsibilities, as well as coordination mechanisms and internal controls.
- c. Human resource competence, referring to the qualifications, professional certifications, practical experience, and continuous capacity development of procurement personnel.
- d. Adoption of e-procurement, defined as the utilization of information technology to support procurement processes electronically – from planning and supplier selection to contracting and performance management.
- e. Strategic procurement orientation, demonstrated by the alignment of procurement strategies with the organization's long-term goals, including aspects such as innovation, value for money, and sustainability.

Advancing maturity signifies a paradigmatic shift from administrative, reactive procurement toward an integrated, proactive, and value-driven approach. Highly mature organizations exhibit procurement functions that not only fulfill administrative tasks but also contribute strategically to accountability, efficiency, and institutional vision (Van Weele, 2010; Cousins et al., 2006; Paulraj et al., 2006).

Technological advancements, particularly the adoption of e-procurement systems, have significantly supported this maturation process in the past decade. These systems improve transparency, reduce manual errors, and enable real-time decision-making by integrating procurement with financial, planning, and risk management systems (Batenburg & Versendaal, 2008). In advanced implementations, digital tools also facilitate predictive analytics, supplier performance evaluation, and contract lifecycle management.

In addition to technological support, the maturity of procurement is also shaped by a shift from price-oriented to value-oriented approaches, encapsulated in the principle of Value for Money (VfM). This approach emphasizes sustainability, service quality, innovation, and long-term contribution to organizational strategy (Garcia Reyes & Giachetti, 2010). Therefore, procurement maturity should be understood not merely as an indicator of operational readiness but also as a catalyst for institutional transformation and public performance enhancement.

To formulate a procurement maturity model that is relevant to organizational needs, it is essential to review existing frameworks and assess their applicability to institutions with diverse characteristics. For BUMDs in particular, a comparative understanding of the basic typologies of existing models is necessary.

Table 1. Comparison of the Three Categories of Procurement Maturity Models

Focus	Public	Private	Hybrid
Orientation	Compliance-driven	Agility-driven	Balanced-existence
Emphasis	Regulatory compliance; transparency	Efficiency; value creation	Accountability innovation
Adaptability	Rigid	Responsive	Cross-sectoral
BUMD Relevance	Strong governance, less suited to business dynamics	Limits regulatory and state-funded accountability	Broad but may lack BUMD specificity

### Critical Review of Existing Models and Conceptual Gaps

Procurement maturity models are generally classified into three major categories: public-sector models, private-sector models, and hybrid models. This classification reflects the differences in governance objectives, institutional structures, and performance expectations inherent in each type of organization.

Public-sector models, such as the OECD’s Methodology for Assessing Procurement Systems (MAPS) and the World Bank Procurement Framework, emphasize key principles of public governance: legal compliance, process transparency, budget accountability, and auditability. These models are widely applied to strengthen institutional capacity through the establishment of regulatory frameworks, procedural standardization, and structured training systems (Nyathore et al., 2024; Yukins & Williams-Elegbe, 2019).

Private-sector models, such as the CIPS Procurement Excellence Model and the Contract Management Maturity Model (CMMM), focus on organizational agility, cost efficiency, proactive supplier relationship management, and data-driven supply chain integration. These models emphasize innovation, fast decision-making, and adaptability to market changes (Bemelmans et al., 2013).

Hybrid models, such as the Project Management Maturity Model (PMMM) and Strategic Management Maturity Model (SMMM), aim to bridge the dichotomy between regulatory compliance and market efficiency. They incorporate public-sector governance principles with private-sector efficiency practices to support cross-functional and adaptive procurement systems. However, these models tend to remain generic and insufficiently contextualized for semi-autonomous organizations like BUMDs (Trautmann, 2021)..

## **Unaddressed Dimensions in General Models and the Specific Needs of BUMDs**

Despite the extensive development of procurement maturity models, several critical dimensions remain underrepresented, especially when applied to hybrid entities like Regional-Owned Enterprises (BUMDs). Most existing models are designed with single institutional logics – either purely public or private – failing to capture the dual-function complexity that characterizes BUMDs (Suliantoro et al., 2022; Maran & Lowe, 2022).

The most underexplored dimensions include:

### **a. Contextualization of Regional Regulations**

Models such as MAPS or the OECD Procurement Framework operate within a uniform national legal system. BUMDs, however, are subject to varied local government regulations and internal board directives, requiring navigation between local autonomy and central oversight (OECD, 2016; LKPP, 2022).

### **b. Policy-Operational Alignment**

Many models overlook the cohesion between procurement policies and their implementation. Misalignment is a major source of inefficiency in BUMDs, which operate with semi-bureaucratic yet business-driven demands (Setianto & Pratiwi, 2021).

### **c. Multilevel Coordination and Political Ownership**

BUMDs engage with regional executives, supervisory boards, regulatory authorities, and public stakeholders. Models such as CIPS or CMMM do not incorporate power dynamics and political accountability – elements that are integral to BUMD governance (Trautmann, 2021; Sutisna, 2024).

### **d. Multidisciplinary and Ethical Human Capital Development**

Technical competence alone is inadequate. BUMDs require personnel with procurement expertise, regulatory literacy, and public sector ethics – dimensions often overlooked in private-sector models (Paulraj et al., 2006; BPKP, 2023).

### **e. Integration with Local Information Systems And Performance Reporting**

E-procurement systems in BUMDs must be compatible with regional financial systems (SIPD, SIMDA), internal control tools (SPIP), and public transparency mechanisms. International standards such as the Open Contracting Data Standard (OCDS) may not be fully applicable in Indonesia's localized governance environment (Open Contracting Partnership, 2020; BPKP, 2022).

## **BUMDs as Hybrid Organizations: Between the State and the Market**

While ministries and local governments function within rigid regulatory frameworks emphasizing administrative compliance, private enterprises are guided by market logic, prioritizing efficiency and profitability. BUMDs operate in a space between these two extremes: they are required to deliver public services while remaining financially accountable to their owners – local governments (Sutisna, 2024).

As such, BUMDs require a procurement maturity model tailored to their hybrid nature:

- a. Operational flexibility combined with public accountability;
- b. Decentralized structures aligned with national governance principles;
- c. Service orientation with an expectation of financial surplus; and

- d. Openness to technology while maintaining compatibility with regional systems.

Existing models fail to fully capture these complexities. Therefore, the development of the BUMD Procurement Maturity Model (BPMM) is intended to bridge these gaps by incorporating the dimensions previously overlooked, offering a contextual, adaptive, and sector-specific framework for Indonesian BUMDs.

This study contributes theoretically by introducing BPMM as a new conceptual framework specifically tailored for hybrid public-sector organizations. It fills a significant gap in the procurement maturity literature by addressing the institutional configurations of BUMDs, which function within both bureaucratic and market logics. By integrating regulatory, institutional, human capital, digital, and strategic dimensions, the BPMM expands the theoretical scope of procurement governance in decentralized and semi-autonomous settings.

Based on an analysis of existing public, private, and hybrid maturity models, there is a notable conceptual gap in addressing the needs of hybrid institutions like BUMDs. The main weaknesses of these models lie in the absence of localized regulatory dimensions, policy-operational synchronization, multistakeholder coordination, and regional information system integration. In this context, the BPMM is proposed as a novel theoretical contribution that expands the literature on institutional maturity by incorporating a semi-public governance perspective within decentralized fiscal and administrative systems. Practically, it provides a diagnostic framework and evidence-based roadmap for procurement reform that can be adapted by various BUMDs in responding to simultaneous demands for efficiency, accountability, and public service performance.

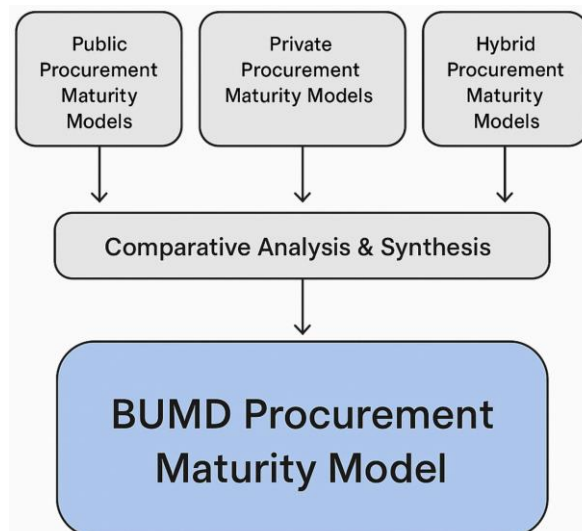


Figure 2. Conceptual Framework of BPMM

## **METHODOLOGY**

### **Conceptual Approach**

This study employs a conceptual synthesis approach in developing the BUMD Procurement Maturity Model (BPMM). This approach is widely utilized in theory-building and conceptual model development, particularly when existing theories or frameworks are insufficiently applicable to evolving hybrid organizational contexts. Conceptual synthesis facilitates the integration, reorganization, and contextual adaptation of multiple theoretical and practical models into a novel, purpose-built framework (Jaakkola, 2020). In the context of Regional-Owned Enterprises (BUMDs) – which operate under dual institutional structures rooted in public governance yet driven by commercial imperatives – this approach offers the flexibility to reconcile principles of public accountability with private-sector performance demands.

Given the dual necessity for BUMDs to comply with governmental oversight while simultaneously maintaining market competitiveness, conceptual synthesis is deemed the most appropriate methodology. It allows for the construction of a prescriptive and diagnostic framework by drawing upon interdisciplinary discourse aligned with the functional characteristics of hybrid institutions.

### **Conceptual Sources**

The development of the BPMM framework was undertaken through a rigorous triangulation of three principal sources of knowledge, each contributing essential insights to ensure the model's conceptual integrity and practical relevance. These sources include:

#### **1. Academic Literature**

The literature review encompassed a wide range of scholarly publications on procurement governance, hybrid organizational theory, institutional management, supply chain integration, and organizational maturity. Foundational contributions from Paulraj et al. (2006), Cousins et al. (2006), Schiele (2007), and Garcia Reyes & Giachetti (2010) provided critical conceptual grounding for understanding procurement maturity and governance duality.

#### **2. Institutional Policy Instruments**

Normative frameworks referenced include the Methodology for Assessing Procurement Systems (MAPS) by the OECD, the World Bank Procurement Framework, and LKPP Regulation No. 5 of 2019 concerning the Measurement of Procurement Maturity Levels for Government Procurement Service Units (UKPBJ). These instruments offer standardized guidance for procurement policy formulation, procedural consistency, institutional strengthening, and capacity development.

#### **3. Industry-Based Models**

Practical maturity models developed by institutions such as the Chartered Institute of Procurement and Supply (CIPS), Software Engineering Institute (SEI), PwC, and A.T. Kearney were also analyzed. These models emphasize critical themes such as digital transformation, value-based procurement, supplier management, and strategic sourcing – elements increasingly relevant for BUMDs facing efficiency demands and market responsiveness.

The triangulation of these three sources ensures that the BPMM is not only grounded in robust theoretical foundations but also highly adaptable to the decentralized and dynamic institutional landscape of BUMDs.

### **Analytical Procedure**

The construction of the BUMD Procurement Maturity Model (BPMM) was carried out through six analytical stages, each designed to ensure methodological rigor, conceptual clarity, and alignment with the operational realities of Regional-Owned Enterprises (BUMDs):

#### **1. Model Identification**

A systematic review was conducted of 42 procurement maturity models spanning public, private, and hybrid sectors. Sources included academic articles, institutional reports, and industry-based frameworks (Aminu et al., 2023; Bemelmans et al., 2013; Kumar et al., 2016).

#### **2. Sector-Based Classification**

The identified models were classified according to their institutional orientation: public sector models emphasize auditability and compliance; private sector models focus on strategic agility and operational efficiency; while hybrid models integrate both by emphasizing flexibility and alignment between governance and performance objectives.

#### **3. Conceptual Comparison**

A comparative matrix was developed to identify shared and distinctive attributes across the models. Analytical variables included procurement policies and standard operating procedures (SOPs), organizational structure, human resource competencies, digital technology utilization (including e-procurement and analytics), and strategic procurement alignment.

#### **4. Best Practice Validation**

Selected models and indicators were validated against international procurement reform frameworks (OECD, World Bank, UNDP) and domestic standards (LKPP). This process ensured that the resulting framework is both internationally relevant and nationally contextualized to Indonesian procurement policy developments.

#### **5. Indicator Consolidation**

The indicators selected were those most frequently cited across different sectors and demonstrably applicable to hybrid organizations. This consolidation yielded a set of core indicators that are operationally relevant and measurable in practical terms.

#### **6. Model Construction and Structuring**

The consolidated indicators were grouped into five strategic dimensions and mapped across five maturity levels: Reactive, Defined, Integrated, Optimized, and Transformative. This tiered structure enables BUMDs to assess their current procurement maturity and define progressive goals for institutional enhancement and reform.

Figure 3 below illustrates the methodological flow of the conceptual synthesis used in the development of the BPMM—beginning with model identification and culminating in a contextual and multidimensional procurement maturity framework.

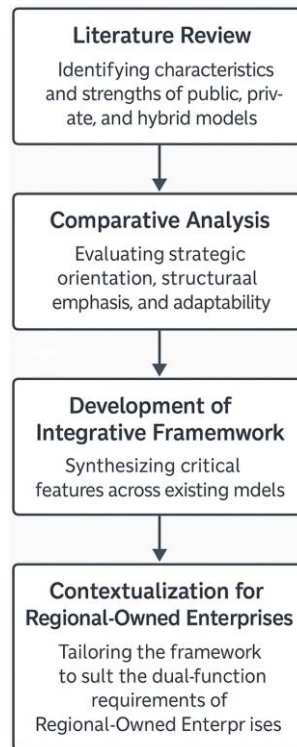


Figure 3. Conceptual Synthesis Methodology Flow

### Validasi Konseptual

To ensure the theoretical rigor and logical coherence of the BUMD Procurement Maturity Model (BPMM), several quality control mechanisms were embedded in its development process:

#### 1. Alignment with Dual Mandates

Each indicator was critically evaluated to ensure its relevance to both public accountability and commercial performance. For example, procurement human resource capacity considers not only public certification standards but also competencies in private-sector strategic sourcing.

#### 2. Cross-Theoretical Referencing

Conceptual consistency was reinforced by referencing well-established theories such as institutional duality, organizational learning, and procurement governance. This approach ensures continuity between theoretical foundations and practical applications.

#### 3. Dimensional Coherence

Internal consistency across dimensions was tested by analyzing how progress in one area (e.g., human capital) supports advancement in others (e.g., digital integration). The model is designed to foster systemic maturity development rather than partial or fragmented improvements.

## RESULT AND DISCUSSION

### Classification of Procurement Maturity Models

The classification of procurement maturity models into three primary categories—public sector, private sector, and hybrid models—provides a foundational framework for understanding how procurement systems evolve within various institutional configurations. For Regional-Owned Enterprises

(BUMDs), which operate in a unique position between public governance and market logic, this classification is crucial as a basis for designing an adaptive and context-sensitive maturity model.

**a. Public Sector Procurement Maturity Models**

Public sector models emphasize legal compliance, budget accountability, and transparency. A defining feature of these models is the presence of rigorously documented procedural structures, auditability, and process standardization (HochstetJääskeläinen et al., 2022). These frameworks are particularly effective in establishing procurement systems that are transparent and administratively sound. In the context of government agencies and public service institutions, such models serve as a key reference for ensuring the integrity of public expenditures (Darmapramita et al., 2015).

However, a critical limitation of public models lies in their structural rigidity, which often results in delays when responding to market dynamics or urgent operational needs. These models tend to be normative in nature and are typically less responsive to fast-changing environments (Aminu et al., 2023). While certain principles remain relevant – especially for oversight and auditing functions – public sector models must be adjusted to accommodate the flexibility required by semi-autonomous structures such as BUMDs.

Table 2. Public Sector Maturity Model

No.	Model	Year	Maturity Level
1.	(Aminu et al., 2023)	2024	Initial, Developing, Defined, Managed, Optimised
2.	(Abduh et al., 2023)	2022	Initial, Repeatable, Defined, Managed, Optimised
3.	(Hochstetter et al., 2021)	2021	Initial, Developing, Coordinating, Managing, Systematic
4.	(Jääskeläinen et al., 2022)	2020	Novice, Experimenter, Facilitator, Advanced, Exploiter
5.	IPM2 LKPP (Darmapramita et al., 2015)	2015	Reactive, Compliance, Proactive, Performed, Sustained
6.	(Volker et al., 2013)	2013	Ad hoc, Repeatable, Standard, Managed, Optimised
7.	PIMM (Portage, 2017)	2011	Initial, Repeatable, Defined, Managed, Optimised
8.	(Xing et al., 2011)	2011	Transactional-oriented, Commercial-oriented, Coordination, Internal-optimised, External-optimised
9.	(Guth, 2010)	2010	Inhibiting, Performing, Enabling, Optimising, Best in Class, World Class
10.	(Concha et al., 2010)	2010	Informative, Simple transactions, Complex transactions, Integrate
11.	(Møller et al., 2010)	2010	Ad hoc, Repetitive, Demonstrated, Controlled, Optimised
12.	(Plomp & Batenburg, 2009)	2009	Initial, Developing, Defined, Managed, Optimised

No.	Model	Year	Maturity Level
13.	CMM (Davis & Walker, 2009)	2009	Initial, Repeatable, Defined, Managed, Optimised
14.	(Rendon, 2008)	2008	Ad Hoc, Basic, Structured, Integrated, Optimised

### b. Private Sector Procurement Maturity Models

This model was developed to promote competitive advantage, cost efficiency, and the strengthening of strategic partnerships with goods and services providers. Its dominant features include a strong emphasis on digital transformation, supply chain integration, and data-driven decision-making (Barth, 2018; Bemelmans et al., 2013). Private sector models encourage organizations to move swiftly, innovate, and adapt to market demands. Their effectiveness is evident in streamlined processes and the alignment of procurement functions with overarching business strategies (Úbeda et al., 2015).

However, these models tend to overlook aspects of public accountability and legal compliance—elements that are critical for organizations funded by public resources or entrusted with public service obligations. For BUMDs, adopting private sector approaches may offer substantial benefits in terms of efficiency and supplier collaboration. Nevertheless, such models must be carefully adapted to uphold transparency and public governance principles, which remain integral to the institutional mandate of Regional-Owned Enterprises.

Table 3. Privat Sector Maturity Model

No.	Model	Year	Maturity Level
1.	(Hamal & Tyagi, 2023)	2023	Initial Process, Structured Processes And Standards, Organisational Standards & Institutionalized Processes, Managed Processes, Optimised Processes
2.	(Seyedghorban et al., 2020)	2020	DigitisaDigitizationlisation, Digital Integration
3.	(Barth, 2018)	2018	Poor Maturity, Basic Maturity, Advanced Maturity, Professional Maturity
4.	(Liu et al., 2018)	2018	Digital Novice, Vertical Integrator, Horizontal Collaborator, Digital Champion
5.	(Geissbauer et al., 2016)	2016	Digital Novice, Vertical Integrator, Horizontal Collaborator, Digital Champion
6.	(Bemelmans et al., 2013)	2015	Transactional Orientation, Commercial Orientation, Purchasing Coordination, Internal Integration, External Integration, Value Chain Integration
7.	(Úbeda et al., 2015)	2014	Transactional Orientation, Commercial Orientation, Purchasing Coordination, Internal Integration, External Integration
8.	(Kearney, 2014)	2014	Typical, Leaders
9.	(Hartmann et al., 2012)	2012	Supplier Management, Cross-Functional Integration, Strategy Development, Human Resource Management, PSM Controlling
10.	(Meng et al., 2011)	2011	Price Competition, Quality Competition, Project Partnering, Strategic Partnering

No.	Model	Year	Maturity Level
11.	(Netland et al., 2010)	2010	Never Exist, Sometimes Exist, Frequently Exist, Mostly Exist, Always Exist
12.	(Tassabehji & Moorhouse, 2008)	2008	Technical Skills, Interpersonal Skills, Internal Enterprise Skills, External Enterprise Skills, Strategic Business Skills
13.	(Schiele, 2007)	2007	Ad Hoc, Basic, Defined, Advanced
14.	(Cousins et al., 2006)	2006	Undeveloped, Celebrity, Capable, Strategic
15.	(Trent & Monczka, 2003)	2003	Domestic Purchasing, International Purchasing as Needed, International Purchasing as Strategy, Global Sourcing Strategies, Integrated Global Sourcing
16.	(Van Weele et al., 1998)	1998	Transaction orientation, Commercial orientation, Coordinated purchasing, Internal integration, External integration, Value chain orientation

### c. Hybrid Procurement Maturity Models

Hybrid models integrate the oversight and compliance principles of public sector frameworks with the agility and efficiency commonly found in private sector models. This approach emphasizes a balance between regulatory governance and operational performance while also promoting digital transformation and institutional innovation (Garcia Reyes & Giachetti, 2010; Kumar et al., 2016; Schiele, 2007). Conceptually flexible, hybrid models are well-positioned to accommodate the complex realities of semi-autonomous organizations such as Regional-Owned Enterprises (BUMDs).

These models support collaborative practices, technological integration, and the internal development of institutional capacity. Although promising in theory, many hybrid models remain generic and are not fully contextualized for institutions with multilevel accountability relationships – particularly those involving local governments, executive boards, and the public. Nonetheless, hybrid models hold the greatest potential as a foundation for developing procurement systems within BUMDs, as they align closely with the dual institutional character of these entities: business-oriented operations underpinned by public governance principles.

Table 4. Hybrid Sector Maturity Model

No.	Model	Year	Maturity Level
1.	PMMM (Kumar et al., 2016)	2016	Initial, Structured, Organisation Standards, Managed, Optimised
2.	(Pongsuwan, 2016)	2016	Foundation, Established, Leading, Excellence
3.	(Tontini et al., 2016)	2016	Unconscious, Partially Realised, Partially Structured, Optimally Integrated
4.	(Serpell et al., 2015)	2015	Basic, Incipient, Defined, Qualitatively Managed, Optimised
5.	(Schweiger, 2014)	2014	Passive, Independent, Supportive, Integrative
6.	(Garcia Reyes & Giachetti, 2010)	2010	Ad Hoc, Defined, Manageable, Collaborative, Leading
7.	SEI (CMMI-ACQ)	2010	Initial, Managed, Defined, Quantitatively Managed, Optimising

No.	Model	Year	Maturity Level
	(SEI, 2010)		
8.	(Davis & Walker, 2009)	2009	Inactive Consciousness, Pre-Active Initiation, Active Adoption, Proactive Adaptation, Routine and Integration
9.	SMMM (Schiele, 2007)	2007	Passive, Independent, Supportive, Integrative
10.	(Paulraj et al., 2006)	2006	Initial, Developing, Advanced
11.	(Batenburg & Versendaal, 2006)	2006	Ad hoc, Basic, Structured, Integrated, Optimised
12.	(Reck & Long, 1988)	1998	Passive, Independent, Supportive, Integrative

### Comparative Evaluation of Procurement Maturity Models

Procurement maturity models in the public, private, and hybrid sectors exhibit distinct orientations. Public sector models, such as IPM2 LKPP, Aminu et al. (2023), and Jääskeläinen et al. (2022), emphasize legal compliance, transparency, and standardization. While effective for regulatory oversight (Darmapramita et al., 2015), they are often rigid and less adaptable to market dynamics (Aminu et al., 2023).

Private sector models (Hamal & Tyagi, 2023; Barth, 2018; Bemelmans et al., 2013) focus on strategic sourcing, digital integration, and supplier collaboration. These frameworks enhance agility and competitiveness (Úbeda et al., 2015), but generally lack mechanisms for public accountability – an essential requirement for state-affiliated organizations like BUMDs.

Hybrid models – including PMMM, SMMM, and CMMI-ACQ (Kumar et al., 2016; Schiele, 2007; SEI, 2010) – integrate regulatory control and operational flexibility. They promote innovation and digital transformation (Garcia Reyes & Giachetti, 2010), yet tend to be too generic for the specific needs of semi-autonomous institutions such as BUMDs.

To bridge these limitations, this study introduces an Integrative Procurement Maturity Model. It synthesizes procedural rigor (public), strategic agility (private), and governance balance (hybrid). Key indicators include: procurement policy alignment, certified procurement personnel, e-procurement usage, supplier partnership strategies, and Value for Money (VfM) orientation.

The integrative model is then contextualized for BUMDs, acknowledging their dual mandate to balance public service obligations with market efficiency. It provides a framework for assessing maturity and guiding reform through a multidimensional, evidence-based approach.

### Development BPMM Framework

The development of the BUMD Procurement Maturity Model (BPMM) is grounded in a conceptual synthesis of public, private, and hybrid maturity frameworks, each contributing distinct advantages to the model's structure and relevance.

Public sector frameworks, such as OECD's MAPS and Indonesia's IPM2, emphasize regulatory alignment, procedural standardization, and digital transparency (Darmapramita et al., 2015; Nyathore et al., 2024). These models provide institutional safeguards and accountability but often lack the adaptability required in fast-paced operational contexts. Private sector models,

exemplified by CIPS and CMMM, are geared toward cost-efficiency, technological adoption, and supplier innovation (Bemelmans et al., 2013). These approaches align procurement with strategic business outcomes but typically overlook public governance principles. Hybrid models, such as SMMM and PMMM, attempt to integrate the strengths of both domains, offering flexibility, innovation, and cross-functional coordination (Schiele, 2007; Garcia Reyes & Giachetti, 2010).

The BPMM consolidates these contributions into a comprehensive and contextualized model for BUMDs. It consists of 25 operational indicators—ranging from structured procurement procedures and institutional coordination to human capital development, e-procurement usage, strategic partnerships, and risk management (Garcia Reyes & Giachetti, 2010). These indicators are organized under five strategic dimensions regulatory governance, institutional capacity, human resource development, digital integration, and strategic procurement orientation.

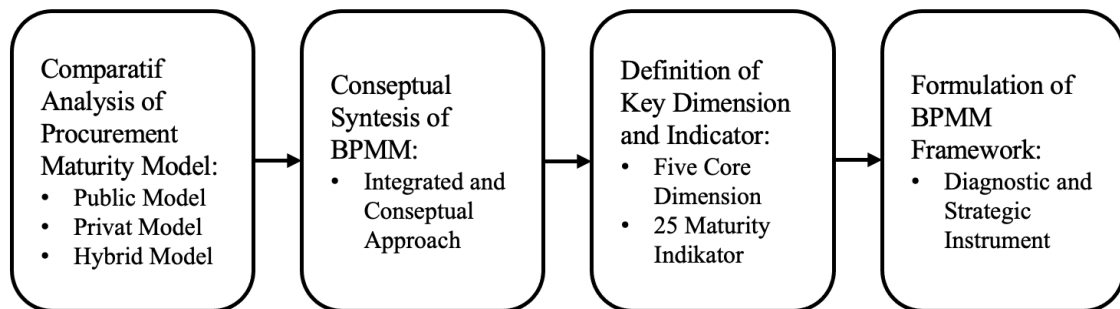


Figure 4. BPMM Model Framework Developmen Flow

Each dimension is mapped across five maturity levels—from Reactive (non-compliant and fragmented systems) to Transformative (fully integrated, innovative, and value-driven procurement).

The model is further strengthened by referencing key instruments such as the OECD-MAPS, World Bank’s Procurement Framework (Nyathore et al., 2024), the CIPS Excellence Model, and the Contract Management Maturity Model (CMMM), ensuring alignment with global standards and practices (Trautmann, 2021).

Designed with institutional duality in mind, BPMM allows BUMDs to:

1. Diagnose procurement capacity,
2. Identify systemic gaps,
3. Implement strategic reforms.

Moreover, its modular structure enables adaptation across various BUMD sectors—including water utilities, energy, transportation, and trade—while maintaining contextual relevance. The model facilitates not only operational enhancement but also contributes to public value creation, fiscal accountability, and sustainable institutional transformation (Nyathore et al., 2024; Trautmann, 2021).

Ultimately, BPMM functions as both a strategic roadmap and an evaluation instrument, supporting evidence-based procurement reform that is both context-sensitive and performance-driven.

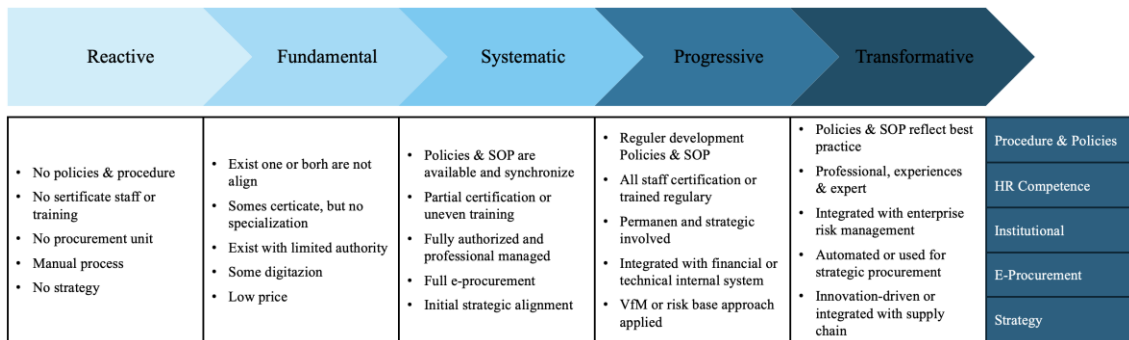


Figure 5. BUMD Maturity Model

## DISCUSSION

The BUMD Procurement Maturity Model (BPMM) constitutes a significant contribution to procurement governance theory, particularly within the domain of hybrid organizations. Developed through a synthesis of attributes drawn from public, private, and hybrid maturity models, BPMM presents a contextualized, responsive, and reform-oriented framework designed to address the complex institutional duality of Regional-Owned Enterprises (BUMDs).

Table 5. Comparative Evaluation of Procurement Maturity Models

Focus	Public	Private	Hybrid
Orientation	Compliance-driven	Agility-driven	Balanced-existence
Emphasis	Regulatory compliance; transparency	Efficiency; value creation	Accountability innovation
Adaptability	Rigid	Responsive	Cross-sectoral
BUMD Relevance	Strong governance, less suited to business dynamics	Limits regulatory and state-funded accountability	Broad but may lack BUMD specificity

Public sector models—such as OECD-MAPS and Indonesia’s IPM2 LKPP—prioritize regulatory compliance, procedural transparency, and audit accountability (Darmapramita et al., 2015; Nyathore et al., 2024). While these models ensure robust oversight, their rigidity often limits responsiveness to rapidly evolving operational contexts (Nyathore et al., 2024). In contrast, private sector models such as the CIPS Procurement Excellence Model and CMMM emphasize strategic agility, cost efficiency, and supplier-driven innovation, yet tend to overlook the regulatory integrity critical to publicly accountable entities (Bemelmans et al., 2013). Meanwhile, hybrid models like PMMM and SEI’s CMMI-ACQ offer theoretical bridges between public and private logics;

however, they remain general-purpose frameworks and lack sufficient contextual specificity for semi-autonomous institutions such as BUMDs (Kumar et al., 2016; Schiele, 2007).

BPMM directly responds to the dual institutional logic embedded in BUMDs, uniting public governance principles with private sector performance imperatives. Its core theoretical contribution lies in the creation of a new typology in procurement maturity literature – one that transcends the binary of public and private sectors to recognize hybridity as an autonomous and legitimate governance dimension. By doing so, BPMM expands the boundaries of institutional theory, proposing a synthesized architecture of compliance and performance.

From an academic standpoint, BPMM reinforces discourses in public management, procurement reform, and hybrid organizational studies. It illustrates that the integration of compliance logic and performance logic is not only feasible but also essential in complex institutional environments. The model advances the theoretical structure of procurement maturity architecture to a more multidimensional and adaptable configuration, particularly relevant for decentralized governance ecosystems.

In practice, BPMM provides a functional and actionable framework for BUMD managers and policymakers to conduct comprehensive procurement diagnostics. Through structured indicators and progressive levels, organizations can assess their current procurement maturity, identify institutional gaps, and design improvement strategies that are objective and evidence-based. It also supports regulatory bodies such as LKPP and BPK in tailoring their guidance and oversight programs to the specific realities of hybrid public enterprises.

Furthermore, BPMM opens pathways for empirical validation and applied research. The model can be operationalized via surveys or maturity audits across sectors. Comparative studies can examine correlations between maturity levels and performance metrics such as efficiency, compliance, supplier diversity, and cost savings. Longitudinal designs may evaluate the extent to which institutional reform contributes to sustained maturity improvement.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusions**

This study has developed a conceptual framework for the BUMD Procurement Maturity Model (BPMM) through a synthesis of procurement maturity models from public, private, and hybrid sectors. The BPMM is contextually designed to address the unique characteristics of Regional-Owned Enterprises (BUMDs), which operate under dual institutional logics – subject to public governance mechanisms while simultaneously required to perform with private-sector efficiency.

Conceptually, the BPMM provides a significant theoretical contribution by integrating regulatory compliance and market performance logic into a coherent model. The framework consists of five core dimensions – regulatory governance, institutional capacity, human capital development, digital integration, and strategic procurement orientation – which are further

operationalized into 25 actionable maturity indicators. This model serves not only as a diagnostic tool for assessing procurement maturity levels but also as a strategic roadmap for guiding institutional reform in an adaptive and progressive manner.

### **Recommendations**

The BPMM is recommended as a practical instrument for BUMDs to systematically assess procurement capacity and institutional gaps, formulate improvement strategies aligned with both regulatory mandates and business efficiency, and serve as a foundation for evidence-based procurement policymaking at the regional level. For regulatory agencies such as LKPP and local governments, the BPMM may be adopted as a standard governance reference for BUMDs, while allowing for flexibility in sectoral variation and regional autonomy. For further development, the model should undergo empirical validation through case studies, maturity surveys, and institutional audits across various BUMD sectors. Pilot testing, involving key stakeholders, is also advisable to evaluate the model's operational validity and practical utility.

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