Eduvest – Journal of Universal Studies
Volume 5 Number 7, July, 2025
p- ISSN 2775-3735- e-ISSN 2775-3727

# Security Strategies For State-Owned Assets (BMN) on Land and Buildings at the Ministry of Public Works

**Yogi Darmawan, Nurkholis, Zaki Baridwan**
Universitas Brawijaya, Indonesia
Email: darmawan_yogi@student.ub.ac.id, nurkholis@ub.ac.id, zaki@ub.ac.id

**ABSTRACT**

*Securing State Property (BMN), especially land and buildings in the infrastructure sector, is an important element in ensuring the optimization of the use of state assets. In the context of increasingly complex and dynamic asset management, the challenges faced include the risk of loss, damage, and misuse of assets that can interfere with the function and value of these assets. Therefore, the development of effective and adaptive security strategies is very important.. This research aims to design and examine BMN security strategies, especially in land and building assets in the infrastructure sector, with a focus on the comprehensive integration of digital information systems. The approach used is qualitative, involving in-depth interviews, field observations, and documentation and analyzed using the Interpretative Phenomenological Analysis (IPA) method. The results of the study identified three main pillars of strengthening BMN security, namely: the application of information technology, policy strengthening, and increasing the capacity of human resources (HR). Information technology plays a crucial role in digitizing asset data, geospatial mapping, and managing legal documents electronically. Strengthening policies is needed to adapt regulations to the dynamics of digitalization, simplifying procedures, and strengthening legal supervision. Meanwhile, increasing the capacity of human resources requires mastery of information technology, data security, and data analysis skills. The strategic implications of these findings show the importance of planned digital transformation, adaptive policy support, and human resource competency development to create a legal, effective, and sustainable BMN security system, while contributing to increasing non-tax state revenue (PNBP).*

**KEYWORDS** State Property (BMN), Asset Security, State Asset Management, Digital Information Systems, Phenomenology



## INTRODUCTION

State Property (BMN) is goods purchased or obtained through the burden of the State Revenue and Expenditure Budget or from other lawful acquisitions (Law Number 1 of 2004). BMN management is a systematic process in managing assets owned by the government, which includes the acquisition, use, utilization, security,

transfer, and elimination of BMN (Government Regulation Number 27 of 2014). Effective management of BMN is important to ensure that these assets are optimally utilized for the Community (de Almeida et al., 2021).

Asset management is influenced by a number of aspects, including non-financial aspects in operations, such as recruitment and selection processes, training and development, compensation systems, and performance evaluations (Kokkaew et al., 2022). In addition, information technology and governance also have a role in the management of government assets (Harfianah & Faisal, 2023). According to Kaganova & Amoils (2020), one of the factors that also contributes to asset management in the global world is technological advancements and new business processes. To execute asset management practices well, the right policies must still be a guideline and avoid overly specific requirements to provide flexibility (Mastroianni et al., 2021).

BMN Security is an effort made by the Goods User Proxy to protect the condition and existence of the BMN it manages, which includes Administrative, Physical, and Legal Security (Regulation of the Minister of Public Works and Public Housing number 30 of 2020). Problems in BMN management, especially related to asset security at the Ministry of Public Works, include land controlled by other parties and the lack of strengthening of land and building rights, such as the ownership of Certificates of Use Rights (SHP) as well as Building Approval Letters (PBG) and Certificates of Functional Fitness (SLF) often hinder the use of the assets themselves.

The absence of a Certificate of Right to Use (SHP) makes the legal status of state land unclear, making it prone to disputes, difficult to be used as an object of cooperation, and at risk of causing lawsuits. Cooperation Partners also tend to be reluctant to use BMN without legal certainty over the land. In addition, if the building does not have a Building Approval (PBG) and a Certificate of Functional Fitness (SLF), then its use is considered illegal and does not meet safety and function standards. This can cause sanctions, endanger users, reduce the interest of cooperation partners, and potentially cause legal and financial losses for the state. As a result of weak security, many state assets are lost, damaged, or cannot be optimized. This is due to untidy recording, lack of supervision, and the absence of a technology-based monitoring system (Arteaga & Cocker, 2022).

Digitalization plays an important role in asset management and supervision, especially in protecting BMN such as land and buildings. This process requires accurate mapping with clear coordinates to identify assets. The integration of asset information models (AIM), Internet of Things (IoT) and blockchain can improve the monitoring and diagnosis of assets through their lifecycle and in various aspects, including financial, physical, functional and sustainability (Ye et al., 2023). Technologies such as QR Codes and Geotagging help detail the physical boundaries

of the land, making it easier for the public and related parties to access information about the ownership and condition of assets. However, the integration of information technology with the operation of physical assets not only improves performance, but also presents new challenges due to increasing expectations and complexity (Kok et al., 2024).

Digital transformation, which is recognized as central to government leaders' efforts to fulfill their responsibilities to society, involves applying digital technologies to innovate and transform the way organizations create value and prepare for the future (Carter et al., 2024). According to Mergel et al., (2019), public sector organizations face demands to improve digital services and provide more benefits to society due to the digital transformation that occurs in society. However, there are still few efforts made to carry out digital transformation in a planned and regular manner in order to accommodate and support change (Lafioune et al., 2023).

This research focuses on securing BMN as a key element in an effective BMN management system through a phenomenological approach. Phenomenological research on BMN security aims to understand the subjective experiences of individuals and organizations in asset management. The security aspect not only includes technical procedures, but also includes the perceptions and actions of the individuals involved. This research emphasizes not only experiences, but also on how individuals interpret and give meaning to those experiences in a broader context (Arteaga & Cocker, 2022; and Lysova et al., 2019).

Previous studies have examined various aspects of asset management and security, such as de Almeida et al. (2021), who focused on the importance of optimizing government assets for public welfare, and Kokkaew et al. (2022), who discussed the role of human resource management in asset operations. However, both studies did not extensively address the role of digital transformation and technology in improving BMN security, particularly in relation to land and building certification. This research fills this gap by adopting a phenomenological approach to understand not only the technical aspects of BMN security but also the perceptions and experiences of those involved in managing these assets. By incorporating digital tools like QR codes, geotagging, and IoT, this study aims to improve the security and management of BMN in a more integrated and sustainable manner.

The purpose of this study is to analyze how BMN security strategies in the form of land and buildings in the infrastructure sector are designed and implemented by utilizing an integrated digital information system. The strategic aspects to be studied include strengthening policies, developing an information technology-based asset management system, and increasing the capacity of human resources in digital management. Thus, this research is expected to formulate strategic recommendations that can strengthen the security of BMN

comprehensively, adaptively, and sustainably, by utilizing information technology as the main foundation in the management of state assets.

## RESEARCH METHOD

This research uses a qualitative method, with a phenomenological approach and an interpretive paradigm. The phenomenological approach was chosen because it provides an opportunity to explore the subjective experiences of managers related to BMN security, especially land and buildings in the infrastructure sector. Qualitative research uses an interpretive approach to study, describe, describe, and translate social phenomena in a comprehensive and in-depth manner (Cadena, 2019).

Through a phenomenological approach, the involvement and perception of BMN managers in securing land and buildings will be easier to explore. The phenomenological paradigm, particularly the interpretive phenomenological analysis (IPA) method, was chosen because of its relevance in gathering in-depth perspectives from informants about their experiences and involvement in the work environment (Smith et al., 1999). Therefore, researchers can gain a better understanding of how informants interpret their experiences and actions.

Data collection was carried out by three main methods: in-depth interviews, observations, and documentation. In-depth interviews use semi-structured guidelines, allowing researchers to derive rich information from individuals, with an emphasis on their experiences and perspectives (Merriam, 2009). This method is effective for gaining in-depth insights and understanding the social and cultural context behind informants' answers (Patton, 2015).

The data analysis in this study uses the Interpretative Phenomenological Analysis (IPA) method, which emphasizes how individuals interpret their experiences and the reasons behind certain views. According to Bougie & Sekaran, (2020), science involves an in-depth analysis of individual narratives, so that researchers can understand the complexity of human experience (Ye et al., 2023). IPA believes that there is a relationship between the experience experienced, the discussion of the experience, and the informant's understanding and emotional reaction to it (Smith, 1996).

Triangulation of data sources and theories is carried out to ensure comprehensive, valid, and reliable findings. The goal is to analyze the results of interviews with informants, see similarities or differences in phenomena, and check the consistency of the findings with their understanding. This approach also aims to avoid bias by using a theoretical perspective. In this way, it is expected to delve deeper into how individuals interpret their experiences in securing BMN and respond to challenges in accordance with applicable regulations, thus providing richer insights into the dynamics in the field.

## RESULT AND DISCUSSION

Securing BMN in the infrastructure sector is a crucial aspect in supporting good governance and ensuring the sustainability of national development. Given the high strategic value and complexity of managing state assets in this sector, an integrated, systematic, and sustainable approach is needed. The challenges faced are not only related to administrative and technical aspects, but also include legal, operational, and security risks that can have an impact on optimizing the use of BMN.

Therefore, strengthening the BMN security system is an urgent priority in order to ensure that state assets can provide optimal benefits for the public interest and support the achievement of overall national development goals. In this study, three main strategies have been identified that can strengthen the security of BMN, namely: (1) the application of information technology, (2) policy strengthening, and (3) increasing the capacity of human resources (HR). The three strategies will be explained in more depth in the following sub-sections:

### Application of Information Technology

The security of BMN, especially on land and buildings in the infrastructure sector, currently relies heavily on the use of information technology as the main foundation in its management strategy. The State Asset Management Information System (SIMAN) is the main tool used for recording, supervision, and reporting of BMN centrally, thereby increasing transparency and accountability compared to manual methods. This is in line with national policies that encourage digitalization in governance, including BMN management, as part of bureaucratic reform and the improvement of public services based on digital technology (Ministry of State Apparatus Empowerment and Bureaucratic Reform, 2024). However, this has not been supported by the application of technology in the field to protect these assets from the risk of damage or loss.

In an ideal context, the BMN security strategy through the application of information technology should lead to the development of an integrated digital asset management system, the use of cloud-based databases to support real-time data access. In addition, it is necessary to digitize BMN documents, both acquisition documents and ownership documents to make it easier for managers to secure the administration of the assets in question and to map the land by utilizing geospatial technology that can describe land boundaries through the shape of polygons. The submission of asset information (be it the name of the asset owner, land boundaries and proof of ownership) to the public through QR Codes that can be accessed on each ownership nameplate is also a step in minimizing the occurrence of occupation by other parties.

Information technology has a crucial role in strengthening the legality aspects of asset ownership, especially those related to important documents such as land certificates, Building Approvals (PBG), and Certificates of Functional Fitness (SLF). By implementing an integrated and digital-based asset management information system, each legal document can be converted into a digital format that is easily accessible and centrally managed. Proprietary documents and other important documents that were previously only physical documents that were vulnerable to damage or loss can now be scanned and stored in a secure database using encryption technology and periodic backups. This significantly speeds up the verification process and reduces the risk of document forgery which is often a source of legal disputes (Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi, 2024).

With the development of this digital asset management system, the risk of losing physical documents due to disaster, damage, or theft can be minimized. In addition, the system also supports the management of digital archives which facilitates searching, thereby speeding up the administrative and decision-making process. In the end, the application of information technology in the management of legal documents not only increases legal certainty regarding the ownership and use of assets, but also strengthens the protection of state assets from potential disputes, misuse, and manipulation of data that are detrimental to the public interest.

**Policy Strengthening**

Strengthening policies related to the use and implementation of information technology in BMN management is a crucial aspect to answer the challenges of state asset management in the current digital era. Although the Minister of Finance Regulation Number 118 of 2023 has been issued which regulates the use of SIMAN (State Asset Management Information System). However, this regulation is still limited to administrative security through asset registration and does not cover comprehensive security aspects, including physical security and strengthening of asset rights. Therefore, policies that regulate the use of information technology for the security of state assets need to be strengthened. The strengthening of these regulations must be accompanied by strict supervision and simplification of administrative procedures to encourage work units to meet the legality aspects of assets quickly, precisely, and comprehensively.

In the face of increasingly complex challenges, state asset security policies require an innovative, flexible, and adaptive approach to change. Innovative policies no longer simply emphasize the rigid application of normative rules or law enforcement, but instead incorporate a number of modern instruments such as the application of advanced technology, the update of operational procedures, and the strengthening of data-based management and transparency. The use of data-based

information technology allows the government to collect, process, and analyze data on state assets comprehensively. For example, when there is a dispute over state assets, the government can directly refer to historical data and legal documents that are stored neatly digitally, so that dispute resolution can take place more fairly, transparently, and efficiently.

With this approach, policies not only strengthen asset security structurally, but also build the foundation of systems that are adaptive to modern threat dynamics. This policy is also designed to anticipate and reduce risks both physical and digital. A technology- and data-based approach allows the government to conduct continuous evaluation and improvement so that asset security is no longer static, but evolves with the changing times and is able to effectively respond to increasingly complex and dynamic security challenges.

**Human Resource Capacity Building**

Increasing the capacity of human resources (HR) is a key factor in the successful application of information technology for the security of BMN, especially land and building assets. The training is comprehensively designed, which includes mastery of technology in digital asset management information systems. The training must be comprehensively arranged to include technical mastery of digital asset management information systems, the use of GIS technology for asset mapping, and strengthening understanding of data security, privacy, and legal regulations related to state asset management. In addition, human resources also need to be equipped with data analysis skills for accurate data-based decision-making (Lafioune, Desmarest, Poirier, & St-Jacques, 2023).

Effective training methods include a combination of face-to-face training, interactive workshops, and flexible e-learning modules, including in remote areas. In addition, cross-sectoral partnerships between governments, educational institutions, and the private sector strengthen the provision of training resources and technology transfer. With this approach, human resources not only master technical skills, but are also able to implement effective security strategies, support the optimization of BMN management, and strengthen the management of state assets in a modern and responsive manner.

However, in its implementation, there are several challenges that must be overcome, such as resistance to technological change, limited infrastructure in remote areas, and lack of coordination between BMN management institutions. This resistance often arises due to HR discomfort or concern about the new system, so effective change management strategies and good communication are needed to reduce these barriers. By overcoming these challenges through innovative policies and investments in the field of human resource development such as partnerships between the Government, educational institutions and the private sector to organize

certified training that includes mastery of digital applications, or the preparation of e-learning modules and workshops on laws and regulations in the field of assets. Thus, reliable human resources are able to support the management of state assets, especially the safeguarding of BMN legally, effectively and accountably in the digital era, as well as being sustainable in facing the dynamics of technological change.

## CONCLUSION

BMN security, particularly for land and building assets in the infrastructure sector, should leverage digital technologies for real-time recording, monitoring, and evaluation. Utilizing an advanced asset management information system enables immediate detection and analysis of asset condition changes, fostering a transparent monitoring dashboard. This improves decision-making accuracy and monitoring effectiveness, supporting the transformation of BMN management into a responsive, data-driven system. However, successful implementation of BMN security strategies also depends on adaptive policies, clear SOPs, inter-agency coordination, and robust regulations. These ensure standardized asset governance, prevent overlap of authority, and enable cross-sector collaboration. A gradual implementation, starting with a pilot project and followed by intensive training programs for human resource development, is crucial. Additionally, investing in cybersecurity and network infrastructure is essential to safeguard data and prevent cyber threats. This strategy not only ensures legal compliance and prevents asset misuse but also contributes to optimizing state asset utilization, boosting non-tax state revenue (PNBP). By accurately tracking idle and productive assets, the government can attract investors and private partners, driving sustainable PNBP growth. It is suggested that the implementation of digital technologies in BMN security begin with a pilot project in select regions to assess its effectiveness before scaling nationwide. This approach allows for addressing potential challenges in technology adoption through continuous feedback and adjustments. Additionally, investing in robust cybersecurity infrastructure should be a priority to safeguard BMN data from emerging digital threats.

## REFERENCES

Arteaga, A., & Cocker, E. (2022). Editorial: Practices of Phenomenological and Artistic Research (Vol. 17, Issue 1).

Benrahman. (2021). Asset management information and tracking system with QR code based on the human-centred design method. Journal of Physics: Conference Series, 1830, 012006. https://doi.org/10.1088/1742-6596/1830/1/012006

Bougie, R., & Sekaran, U. (2020). Research Methods For Business: A Skill Building Approach (8th ed.). John Wiley and Sons, Inc. .

Cadena, S. J. (2019). Qualitative research: interactions and experiences. 22(3), 292–293. https://doi.org/10.29375/issn.0123-7047

Carter, L., Desouza, K. C., Dawson, G. S., & Pardo, T. (2024). Digital transformation of the public sector: Designing strategic information systems. In Journal of Strategic Information Systems (Vol. 33, Issue 3). Elsevier B.V. https://doi.org/10.1016/j.jsis.2024.101853

De Almeida, N. M., Vieira, J., Silva, J. G., & e Castro, C. (2021). The Impact of Asset Management Development Programs in Infrastructure Organizations. Advances in Science, Technology and Innovation, 247–258. https://doi.org/10.1007/978-3-030-35533-3_29

Hortizuela, M. R. (2019). Asset Guard: A multi-platform asset management system using QR code and geolocation. Don Mariano Marcos Memorial State University.

Harfianah, S., & Faisal, F. (2023). Faktor-Faktor yang Memengaruhi Pengelolaan Aset Pemerintah. E-Jurnal Akuntansi, 33(10), 2534–2549.

Kaganova, O., & Amoils, J. M. (2020). Central government property asset management: a review of international changes. In Journal of Corporate Real Estate (Vol. 22, Issue 3, pp. 239–260). Emerald Group Holdings Ltd. https://doi.org/10.1108/JCRE-09-2019-0038

Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi - Menteri Rini: Transformasi Digital dan Perbaikan Tata Kelola Pemerintahan Jadi Jurus Jitu Berantas Korupsi. (2024). Retrieved June 5, 2025, from https://menpan.go.id/site/berita-terkini/menteri-rini-transformasi-digital-dan-perbaikan-tata-kelola-pemerintahan-jadi-jurus-jitu-berantas-korupsi

Kokkaew, N., Jokkaw, N., Peansupap, V., & Wipulanusat, W. (2022). Impacts of human resource management and knowledge management on non-financial organizational performance: Evidence of Thai infrastructure construction firms. Ain Shams Engineering Journal, 13(6). https://doi.org/10.1016/j.asej.2022.101750

Lafioune, N., Desmarest, A., Poirier, É. A., & St-Jacques, M. (2023). Digital transformation in municipalities for the planning, delivery, use and management of infrastructure assets: Strategic and organizational framework. Sustainable Futures, 6, 100119. https://doi.org/10.1016/J.SFTR.2023.100119

Lysova, E. I., Allan, B. A., Dik, B. J., Duffy, R. D., & Steger, M. F. (2019). Fostering meaningful work in organizations: A multi-level review and integration. In Journal of Vocational Behavior (Vol. 110, pp. 374–389). Academic Press Inc. https://doi.org/10.1016/j.jvb.2018.07.004

Mastroianni, E., Lancaster, J., Korkmann, B., Opdyke, A., & Beitelmal, W. (2021). Mitigating infrastructure disaster losses through asset management practices in the Middle East and North Africa region. International Journal of Disaster Risk Reduction, 53. https://doi.org/10.1016/j.ijdrr.2020.102011

Mergel, I., Edelmann, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. Government Information Quarterly, 36(4). https://doi.org/10.1016/j.giq.2019.06.002

Patton, M. Q. (2015). Qualitative Research & Evaluation Methods (Fourth Edition). SAGE Publications.

Peraturan Pemerintah Nomor 27 Tahun 2014 tentang Pengelolaan Barang Milik Negara/Daerah.

Peraturan Menteri Pekerjaan Umum dan Perumahan Rakyat Nomor 30 Tahun 2020 tentang Pengamanan Barang Milik Negara.

Peraturan Menteri Keuangan Nomor 118 Tahun 2023 tentang Pedoman Pengelolaan Barang Milik Negara dengan Menggunakan Sistem Informasi Manajemen Aset Negara.

Ye, Z., Kapogiannis, G., Tang, S., Zhang, Z., Jimenez-Bescos, C., & Yang, T. (2023). Influence of an integrated value-based asset condition assessment in built asset management. Construction Innovation. https://doi.org/10.1108/CI-11-2021-0216