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Strategic Initiatives for Digital Transformation in Inclusive Procurement Ecosystems of UKPBJ Kemenkeu

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Abstract. Digital transformation is essential for modernizing public procurement systems, particularly within the Procurement Unit of the Ministry of Finance of the Republic of Indonesia (UKPBJ Kemenkeu). This paper explores the strategic design and implementation of such transformation, emphasizing its role in fostering efficiency, transparency, and sustainability in procurement processes. A qualitative approach was employed, analyzing the integration of digital tools and strategies across four foundational pillars: changes in work patterns and governance, business process simplification, human resource empowerment, and a data-driven approach. Data were collected through organizational records, interviews, and case studies of the implemented initiatives. The transformation strategy yielded five interrelated initiatives that culminated in eleven synergistic innovations. These initiatives streamlined procurement workflows, enhanced inter-agency collaboration, and improved decision-making through real-time data analysis. The findings highlight the importance of aligning digital transformation with organizational goals and stakeholder needs. Key success factors included leadership commitment, cross-functional collaboration, and adaptive capacity-building efforts. The digital transformation efforts at UKPBJ Kemenkeu have significantly improved the effectiveness and efficiency of procurement processes. These innovations provide sustainable benefits for the organization and its stakeholders, positioning the unit as a model for inclusive and accountable public procurement.

Keywords: Data-Driven Practices; Digital Transformation; Ministry of Finance; Procurement Unit; Public Sector

1. Introduction

Digital transformation (DT) involves leveraging digital technologies to innovate and transform existing business models, processes, and organizational structures while enhancing interactions with stakeholders (Borisova et al., 2021; Reis & Melão, 2023; Rodríguez-Abitia & Bribiesca-Correa, 2021; Vial, 2019). In contemporary organizations,

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digital technologies influence every aspect of operations, including production, organizational hierarchies, and relationships with partners, suppliers, and customers (Chwiłkowska-Kubala et al., 2023; Ellström et al., 2022; Feliciano-Cestero et al., 2023). These advancements have triggered disruptive changes, often leading to uncertainty and obsolescence of traditional business models (Anderton & Turner, 2022; Sopian et al., 2023; Stokke et al., 2022). Consequently, organizations adopt strategic approaches to integrate digital transformation, ensuring agility and resilience in their operations (Dang-Pham et al., 2022; Mohamed Hashim et al., 2022; Nusa Perdana, 2019; Rodríguez-Abitia & Bribiesca-Correa, 2021).

The public sector is not immune to these challenges. Governments worldwide are increasingly adopting digital solutions to enhance service delivery, transparency, and accountability. However, public sector transformations differ from those in the private sector due to differing objectives, with a focus on public welfare rather than revenue maximization. This distinction necessitates a contextual understanding of DT in government settings, particularly in areas like public procurement, which plays a vital role in economic development and governance.

This paper focuses on the design and implementation of DT within the Procurement Unit of the Ministry of Finance of the Republic of Indonesia (UKPBJ Kemenkeu). The study emphasizes the integration of digital solutions to enhance efficiency, transparency, collaboration, and sustainability in procurement processes, aligning with national goals such as increasing domestic product spending and empowering Micro, Small, and Cooperative Enterprises (UMKM).

The public procurement process in Indonesia has traditionally faced challenges such as inefficiencies, lack of transparency, and limited inclusivity (Al-Sinan & Bubshait, 2022; Natoli et al., 2023; Nodehi et al., 2022). These issues hinder the achievement of national procurement objectives, including economic empowerment and the promotion of sustainable practices. The conventional systems often rely on labor-intensive processes, creating bottlenecks and increasing the risk of errors and corruption.

In response, the integration of digital technologies within public procurement systems is seen as a strategic solution. Digital transformation offers tools to streamline workflows, enhance transparency, and foster collaboration among stakeholders. However, the implementation of DT in public procurement systems is fraught with challenges such as resistance to change, skill gaps, and the need for significant investments in technology and training.

Despite the growing body of research on digital transformation, there remains a limited understanding of its application in the public procurement sector, particularly in developing countries. Existing studies often focus on private sector implementations or examine DT in broader government contexts without delving into specific functional areas like procurement. Furthermore, few studies provide a comprehensive framework for integrating DT in public procurement ecosystems, addressing both strategic and operational dimensions.

This paper bridges this gap by presenting the design and implementation of DT in the UKPBJ Kemenkeu. It highlights the practical application of digital technologies to address procurement challenges and evaluates the impact of such transformations on organizational and national objectives. By focusing on a specific case, this study contributes to the discourse on DT in the public sector, offering insights and lessons applicable to similar contexts globally.



2. Methods

The methodology employed in this study combines qualitative and descriptive approaches to explore the design and implementation of digital transformation (DT) within the Procurement Unit of the Ministry of Finance of the Republic of Indonesia (UKPBJ Kemenkeu). This approach provides a detailed understanding of the strategies, processes, and impacts of DT initiatives while offering a comprehensive framework that can inform similar efforts in other public sector organizations (Feliciano-Cestero et al., 2023; Suhartono, 2024; Zhang & Chen, 2024).

To achieve the study's objectives, a case study method was used. This approach is particularly suitable for examining complex phenomena within their real-life contexts, such as the organizational transformation of procurement processes. Data were collected from multiple sources to ensure a robust and comprehensive analysis. Document analysis was conducted by reviewing organizational policies, reports, project plans, and procurement guidelines to understand the structure and scope of DT initiatives. Semi-structured interviews were also undertaken with key stakeholders, including policymakers, procurement officers, IT personnel, and supplier representatives, to explore perceptions, challenges, and outcomes associated with the transformation process. Additionally, direct observations of implementation activities were made to gain insights into the operational changes and the adoption of digital tools within the procurement workflow.

The collected data were analyzed using thematic analysis to identify recurring themes and patterns related to the design, implementation, and outcomes of DT initiatives (Kristian Ibrahim et al., 2019; Nurnadhifa & Syahrina, 2021; Sjodin et al., 2023). This analysis was conducted in three phases: coding, where data were categorized into themes such as governance changes, process simplification, human resource development, and data-driven decision-making; theme development, where key themes were refined and clarified; and interpretation, where findings were contextualized within the existing literature and the specific circumstances of UKPBJ Kemenkeu.

The study structured its analysis around four main pillars of DT: governance and work pattern changes, business process simplification, human resource empowerment, and data-driven approaches. These pillars served as the basis for evaluating the five interrelated initiatives and their outcomes, including the development of eleven synergistic innovations. Triangulation was used to enhance the validity of the findings by cross-referencing data from different sources such as documents, interviews, and observations. Member checking, involving the sharing of preliminary findings with stakeholders, further ensured the accuracy and reliability of interpretations.

3. Results and Discussion

3.1. Digital Transformation in The UKPBJ Kemenkeu

Digital transformation is influencing a wide range of organizations, spanning both the private and public sectors. Although it presents numerous advantages, the implementation of digital transformation also introduces various risks for these organizations (Clement Marvello Fedihartono et al., 2023; Nurnadhifa & Syahrina, 2021; Nusa Perdana, 2019). These risks can impact several dimensions, including stakeholders, technology, processes, culture, organizational structure, and strategic direction (Arifiyanto et al., 2021; Gunawan et al., 2017; Murtomo & Riyanto, 2021). Notably, the public sector has been slower to adopt digital innovations, as highlighted in recent



discussions. This delay adversely affects public procurement, which struggles with inadequate interoperability and coordination among stakeholders, ineffective policy implementation, and insufficient technical support (Schmitz & Wimmer 2024).

The UKPBJ of the Ministry of Finance is implementing digital transformation to strengthen an inclusive procurement ecosystem. This initiative aims to maintain interoperability and ensure smooth coordination among stakeholders in the procurement process. During the implementation phase, the digital transformation of goods and services procurement adopts digital technologies to enhance efficiency, transparency, and accountability within the procurement process.

Digital transformation in the procurement of goods and services involves more than merely converting manual processes into electronic ones; it is also about transforming organizational work practices and culture to become more adaptive and responsive to market and technological changes. The design of an inclusive procurement ecosystem within the Ministry of Finance is facilitated through digital transformation, which is implemented by strengthening the pillars of the UKPBJ organization through new initiatives that can be developed by the organization, as illustrated in the Figure 1.

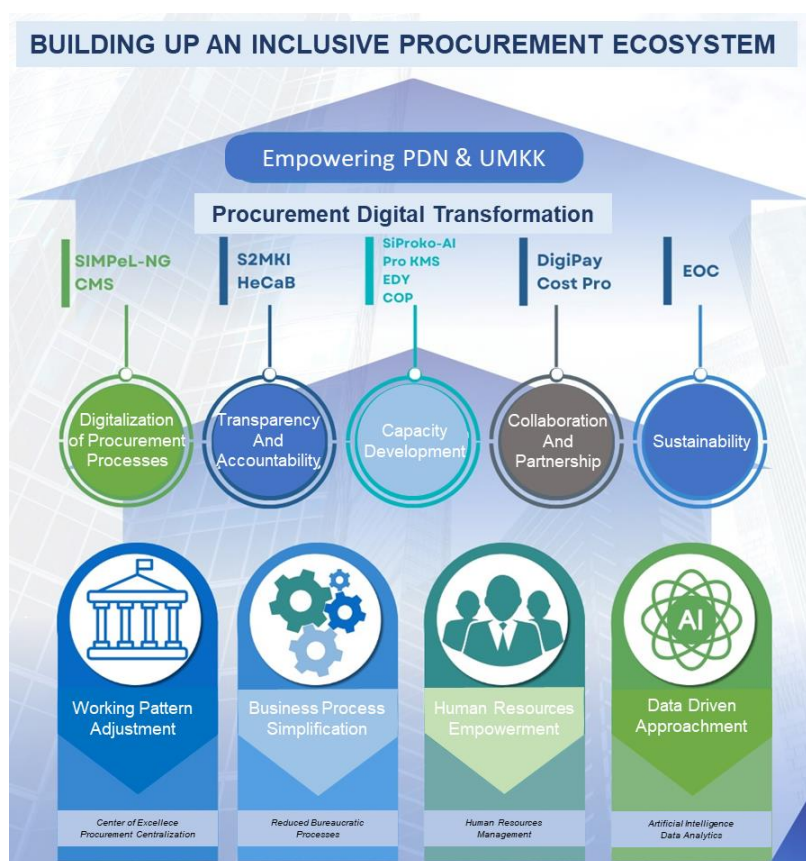


Figure 1 Digital Transformation in the UKPBJ Kemenkeu

3.2. Pillars of Digital Transformation in the UKPBJ Kemenkeu

Digital Transformation in the UKPBJ Kemenkeu is based on four main pillars aimed at strengthening the organization of the Procurement Unit (UKPBJ). The first pillar involves changes in work patterns and governance toward an excellent organization and the centralization of procurement. This includes the integration of the Center of Excellence



(CoE) function with performance management, the centralization of procurement services across Indonesia, and regulatory changes that align with current needs. Additionally, proactive assistance and the creation of an early warning system through a Clearing House, along with probity advice and probity audits, are also components of this pillar.

The second pillar is the simplification of business processes to create a more effective organization by reducing bureaucracy. This is achieved through the automation and interconnection of administrative procedures, the acceleration of administrative workflows, and the elimination of manual procedures. Responsiveness to service requests and seamless coordination across space and time are also key focuses, along with the interconnectedness of the procurement workflow among entities.

The third pillar is the development of empowered human resources, with a focus on dynamic and agile human resource planning and management. Structured enhancement of human resource competencies, the creation of Communities of Practice (CoP), and knowledge management are essential components of this pillar, along with the establishment of proficient human resources in the fields of information and communication technology through careful talent management.

The fourth pillar is the implementation of a data-driven approach, which enables smarter decision-making based on data analytics and artificial intelligence (AI). This includes predicting budgetary needs, providing more precise specifications/pricing recommendations, and enhancing the efficiency of timing selection processes, as well as real-time risk prediction (such as fraud detection). Additionally, it involves early warning systems or contract implementation recommendations based on supplier performance.

The four pillars of organizational strengthening for the UKPBJ (Unit Kerja Pengadaan Barang/Jasa) of the Ministry of Finance are implemented through five interrelated initiatives that support each other. Those five initiatives are:

3.2.1. *The digitalization of the procurement process*

The digitalization of procurement processes represents a transformative approach to modernizing the procurement ecosystem by leveraging technology to enhance efficiency and accountability. Through automation and improved monitoring capabilities, this initiative addresses common challenges in traditional procurement systems, such as human errors, administrative redundancies, and time-intensive manual processes. By streamlining workflows, the digitalization of procurement ensures that resources are utilized more effectively and that processes align with best practices and regulatory standards.

Two key innovations exemplify the impact of digitalization within the Ministry of Finance: the next-generation direct procurement management information system (SIMPEL-NG) and the Ministry of Finance's contract management system (CMS). SIMPEL-NG revolutionizes direct procurement by introducing advanced automation features that facilitate end-to-end process management. From initiating procurement requests to evaluating vendor proposals and awarding contracts, SIMPEL-NG provides a seamless platform that improves transparency and accountability. This system also enhances decision-making through integrated data analytics, allowing procurement officers to track performance metrics, identify bottlenecks, and make data-driven improvements.

The Ministry of Finance's contract management system (CMS) complements SIMPEL-NG by focusing on the efficient handling of contracts. CMS centralizes contract-related data, enabling stakeholders to access and manage information in real time. This system



ensures that all contractual obligations are met while reducing risks associated with non-compliance or mismanagement. Additionally, CMS supports the automation of key functions such as renewal alerts, performance tracking, and dispute resolution, further streamlining the contract lifecycle.

Together, these innovations demonstrate how digitalization can transform procurement processes into a more efficient, transparent, and accountable system. By reducing manual interventions and leveraging data-driven insights, SIMPEL-NG and CMS not only enhance operational efficiency but also contribute to achieving broader organizational goals, such as cost savings, improved service quality, and compliance with national policies.

3.2.2. *Transparency and accountability*

Transparency and accountability are fundamental principles that ensure the integrity of procurement processes by promoting information openness and deterring unethical practices such as conflicts of interest and corruption. In the context of the Ministry of Finance, enhancing these principles has been instrumental in fostering trust among stakeholders and aligning procurement practices with good governance standards. Digital innovations have played a crucial role in this transformation by introducing tools that strengthen the transparency and accountability framework.

One such innovation is the implementation of the Information Security Management System Standards (S2MKI). This system establishes robust protocols for managing and securing sensitive procurement data, ensuring that information is accurate, accessible only to authorized personnel, and safeguarded against breaches. By enforcing stringent data governance measures, S2MKI minimizes opportunities for unethical behavior while providing a clear audit trail for all procurement activities. This transparency not only reduces the likelihood of irregularities but also boosts stakeholder confidence in the procurement process.

The helpdesk chatbot (HeCaB) represents another key innovation aimed at enhancing transparency and accountability. HeCaB provides real-time assistance to users, addressing inquiries related to procurement procedures, regulations, and updates. By ensuring that accurate and timely information is readily available, the chatbot reduces information asymmetry and prevents misunderstandings that could lead to disputes. Additionally, the automated nature of HeCaB ensures impartiality, further strengthening its role as a tool for accountability.

Together, S2MKI and HeCaB illustrate how digital tools can transform procurement processes into more transparent and accountable systems. These innovations not only deter unethical practices but also streamline communication and information management, contributing to a procurement environment that upholds integrity, efficiency, and stakeholder trust. The integration of these tools underscores the Ministry of Finance's commitment to maintaining high standards of governance in public procurement.

3.2.3. *Capacity building*

Capacity building is a cornerstone of the Ministry of Finance's strategy to enhance the professionalism and competency of human resources engaged in the procurement of goods and services. By equipping personnel with the necessary knowledge and skills, capacity-building initiatives ensure that the workforce can adapt to evolving procurement challenges and contribute to achieving organizational goals. Four key innovations—



SiProko-AI, Pro KMS, EDY, and CoP—form the backbone of this initiative, each addressing distinct aspects of human resource development.

The AI-based risk profiling system, SiProko-AI, leverages artificial intelligence to assess and manage procurement risks effectively. By analyzing historical data and identifying patterns, SiProko-AI provides procurement officers with actionable insights to mitigate risks and make informed decisions. This system not only enhances decision-making capabilities but also empowers staff to adopt a proactive approach in managing complex procurement scenarios.

The procurement knowledge management system (Pro KMS) serves as a centralized repository for best practices, guidelines, and case studies related to procurement. By facilitating easy access to curated knowledge, Pro KMS supports continuous learning and fosters a culture of excellence among procurement professionals. This innovation ensures that personnel remain updated on the latest developments and standards, enhancing their ability to deliver high-quality outcomes.

The embracing digital years program (EDY) focuses on integrating digital skills into the workforce, preparing staff to navigate the rapidly digitizing procurement landscape. Through targeted training and hands-on experience, EDY equips personnel with the tools needed to leverage digital platforms effectively, thereby enhancing efficiency and innovation in procurement processes.

Lastly, the community of practice (CoP) creates a collaborative network for procurement professionals to share experiences, exchange ideas, and solve challenges collectively. By fostering peer-to-peer learning and collaboration, CoP enhances the collective expertise and resilience of the procurement workforce.

Together, these innovations ensure that capacity building remains a dynamic and impactful element of the Ministry of Finance's procurement modernization efforts, aligning human resource development with broader organizational objectives.

3.2.4. *Collaboration and partnerships*

Collaboration and partnerships play a vital role in modernizing procurement by fostering strong cooperation between stakeholders and enabling the development of innovative and efficient solutions. By uniting diverse perspectives and expertise, collaboration enhances the capacity of procurement systems to adapt to challenges and deliver value to all parties involved. Within the Ministry of Finance, the emphasis on collaboration and partnerships has resulted in two significant innovations: the DigiPay marketplace (DigiPay) and the cost project management system (Cost Pro).

DigiPay serves as a digital marketplace designed to streamline the procurement of goods and services. By bringing together buyers, suppliers, and service providers on a single platform, DigiPay promotes efficiency, transparency, and competitiveness in procurement. The marketplace simplifies the procurement process by offering a centralized platform for transactions, ensuring that users can compare options, secure the best value, and finalize purchases with ease. Moreover, DigiPay incorporates robust monitoring and reporting features, enabling stakeholders to track procurement activities and ensure compliance with regulations. This innovation not only enhances operational efficiency but also strengthens trust among stakeholders by providing a transparent and equitable procurement environment.

Cost Pro, on the other hand, focuses on the effective management of project-related expenses. This system supports stakeholders in planning, monitoring, and controlling



costs throughout the project lifecycle, ensuring that resources are allocated efficiently and budgetary constraints are respected. Cost Pro facilitates collaboration by enabling real-time data sharing and communication among project teams, procurement officers, and financial managers. This collaborative approach reduces errors, enhances accountability, and ensures that projects are delivered on time and within budget.

Together, DigiPay and Cost Pro exemplify how collaboration and partnerships can lead to transformative advancements in procurement. These innovations demonstrate the Ministry of Finance's commitment to leveraging collective expertise and digital tools to create a more efficient, transparent, and sustainable procurement ecosystem.

3.2.5. Sustainability

Sustainability is a critical component of modern procurement practices, emphasizing the procurement of goods and services that deliver value beyond cost considerations by fostering positive social and environmental impacts. In line with this principle, the Ministry of Finance has prioritized sustainability within its procurement framework, promoting practices that align with long-term environmental stewardship and societal well-being. This commitment has given rise to the innovative Eco Office Certification (EOC), a tool designed to embed sustainability into organizational operations.

The EOC initiative aims to incentivize and recognize procurement practices that adhere to eco-friendly principles, encouraging organizations to adopt measures that reduce their environmental footprint. This certification promotes resource efficiency, energy conservation, and waste minimization within offices, ensuring that procurement decisions contribute to broader sustainability goals. By setting clear criteria and standards, the EOC provides a structured pathway for organizations to evaluate and enhance their environmental performance.

Beyond environmental benefits, the EOC also drives cultural change by fostering awareness of sustainability among stakeholders. Procurement teams are encouraged to prioritize suppliers and products that demonstrate environmental responsibility, creating a ripple effect that influences supply chain practices and promotes green innovation. The certification not only strengthens accountability within procurement processes but also aligns with national and international sustainability targets, reinforcing the Ministry's role as a leader in sustainable public procurement.

Moreover, the EOC underscores the importance of balancing economic, social, and environmental considerations in procurement decisions. By prioritizing sustainability, the Ministry of Finance demonstrates a commitment to achieving holistic value that benefits society and future generations. The initiative exemplifies how sustainability can be seamlessly integrated into procurement frameworks, ensuring that public sector practices contribute to the broader agenda of sustainable development and environmental responsibility.

3.3. Innovations of UKPBJ Kemenkeu

The digital transformation initiatives undertaken by the Procurement Unit of the Ministry of Finance (UKPBJ Kemenkeu) have culminated in the development of eleven interconnected innovations. These innovations are strategically designed to work synergistically, addressing various dimensions of the procurement process to enhance efficiency, effectiveness, and sustainability. By aligning with the principles of digital



transformation, these innovations ensure that every facet of procurement operations is optimized to deliver comprehensive value to the organization and its stakeholders.

Each innovation stems from one or more of the five core initiatives—digitalization, transparency, accountability, collaboration, capacity building, and sustainability. Together, they establish a cohesive ecosystem that integrates advanced technology, robust governance, and strategic partnerships. This holistic approach transforms procurement into a streamlined, data-driven, and environmentally responsible function that aligns with the Ministry’s broader objectives.

The impact of these innovations extends beyond operational efficiency. They provide measurable improvements in service delivery, reduce risks of corruption and inefficiencies, and ensure compliance with regulatory standards. Furthermore, these innovations are designed to be scalable and adaptable, allowing the Ministry to respond effectively to future challenges and evolving stakeholder needs.



Figure 2 Innovations of UKPBJ Kemenkeu

Most importantly, the synergistic nature of these innovations ensures that they collectively support sustainable practices. Whether through promoting eco-friendly procurement, enhancing human resource competencies, or improving stakeholder



collaboration, these innovations create a positive feedback loop that reinforces their individual and collective benefits.

By integrating these eleven innovations into its operations, UKPBJ Kemenkeu not only enhances its procurement processes but also sets a benchmark for public sector excellence. This comprehensive transformation demonstrates the Ministry's commitment to innovation, accountability, and sustainability, delivering lasting positive impacts for all stakeholders involved in the procurement of goods and services.

3.4. The Next-Generation Direct Procurement Management Information System (SIMPEL-NG)

SIMPEL-NG is an innovative e-procurement solution aimed at automating direct procurement processes with an easily applicable design. Used by the UKPBJ of the Ministry of Finance and several other agencies, SIMPEL-NG enhances its predecessor with significant improvements to better meet user needs. The system transforms manual procurement activities into automated ones, providing essential reference information such as technical specifications and Estimated Prices (HPS), thus increasing efficiency, transparency, and accountability.

By optimizing human resources, SIMPEL-NG enhances work efficiency, reduces operational costs, and allows for virtual procurement without spatial or temporal constraints. Recognized in 2022 as one of the top five innovations in the Ministry of Finance, it has also been registered for copyright protection. The implementation of SIMPEL-NG not only improves the procurement process but also elevates the quality of goods and services, enhancing the competencies of procurement officials and suppliers, and setting a new standard for direct procurement in government agencies.

**SURAT PENCATATAN
CIPTAAN**

Dalam rangka perlindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, dengan ini menerangkan:

| | |
|---|--|
| Nomor dan tanggal permohonan | : EC00201800914, 22 Januari 2018 |
| Pencipta | |
| Nama | : Kementerian Keuangan |
| Alamat | : Jalan Lapangan Banteng Timur No 2-4, Jakarta Pusat, DKI Jakarta, 10710 |
| Kewarganegaraan | : Indonesia |
| Pemegang Hak Cipta | |
| Nama | : Kementerian Keuangan |
| Alamat | : Jalan Lapangan Banteng Timur No 2-4, Jakarta Pusat, DKI Jakarta, 10710 |
| Kewarganegaraan | : Indonesia |
| Jenis Ciptaan | : Program Komputer |
| Judul Ciptaan | : Sistem Informasi Manajemen Pengadaan Langsung (SIMPEL) |
| Tanggal dan tempat diumumkan untuk pertama kali di wilayah Indonesia atau di luar wilayah Indonesia | : 7 Maret 2014, di Jakarta Pusat |
| Jangka waktu perlindungan | : Berlaku selama 50 (lima puluh) tahun sejak Ciptaan tersebut pertama kali dilakukan Pengumuman. |
| Nomor pencatatan | : 000100330 |

adalah benar berdasarkan keterangan yang diberikan oleh Pemohon.
Surat Pencatatan Hak Cipta atau produk Hak terkait ini sesuai dengan Pasal 72 Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta.

Figure 3 Copyright Registration of SIMPEL-NG



3.5. Contract Management System (CMS) Kemenkeu

CMS Kemenkeu is an innovative approach designed to address contract control issues with a user-friendly implementation design. This system is utilized by all procurement stakeholders within the Ministry of Finance and aims to enhance overall contract management.

With CMS Kemenkeu, monitoring contract execution becomes more straightforward and integrated, covering all phases from preparation to handover and payment. The system automates processes that were previously conducted manually by PPK and the Assistance Team, providing valuable information related to progress and emerging issues. Additionally, CMS Kemenkeu optimizes the efficiency of PPK and the Assistance Team, reduces operational costs, and enables oversight to be conducted without spatial and temporal limitations, thereby improving the overall quality of contract execution.

3.6. Information Security Management System Standards (S2MKI)

The implementation of S2MKI at the UKPBJ of the Ministry of Finance represents an innovative solution aimed at enhancing information security through the application of ISO 27001 standards. Since 2012, S2MKI has strengthened the e-procurement system, fostering stakeholder trust in data security and raising awareness among procurement actors about the importance of safeguarding information.



Figure 4 ISO/IEC 27001 Implementation Award

S2MKI also plays a crucial role in optimizing human resources, ensuring that information security is managed effectively and efficiently while reducing the financial risks associated with data breaches. The awards received by the UKPBJ of the Ministry of



Finance for consistently applying information security standards reflect its success in enhancing the security of procurement transactions. With S2MKI, the procurement process becomes safer and more transparent, thereby increasing public trust in the procurement activities of the UKPBJ and creating a more secure and reliable procurement environment.

3.7. Helpdesk Chat-Bot (HeCaB)

HeCaB is an innovative solution that provides 24/7 procurement consulting services through an automated chat system on mobile devices. The system is designed to facilitate communication between users and the procurement helpdesk at the UKPBJ of the Ministry of Finance. Since its introduction in 2022, HeCaB has been effectively utilized by procurement stakeholders and suppliers.

The primary advantage of HeCaB is its ability to offer services without time constraints, allowing staff to monitor service status and assess performance in real time. HeCaB transforms the previously face-to-face, phone, or email services available only during business hours into accessible services at any time. The recognition received as the First Place Award for Compliance with Public Service Standards in 2022 from the Ombudsman of Indonesia highlights the UKPBJ's commitment to providing quality and transparent public services. With HeCaB, the quality of procurement services has improved, leading to increased stakeholder satisfaction.



REKAPITULASI HASIL PENILAIAN PENYELENGGARAAN PELAYANAN PUBLIK PEMERINTAH PUSAT TAHUN 2022

Pemerintah Pusat : Kementerian Keuangan
Periode Observasi : Agustus - November 2022

| No | Unit Layanan | Dimensi Penilaian | | | | Nilai |
|----------------------|---------------------------------------|-------------------|--------|--------|-----------|--------------------|
| | | Input | Proses | Output | Pengaduan | |
| 1 | Kantor Pusat DJKN : Dit. Lelang | 20.26 | 32.37 | 20.73 | 21.53 | 94.89 |
| 2 | Biro Manajemen BMN dan Pengadaan | 22.13 | 32.37 | 22.64 | 21.53 | 98.67 |
| 3 | Pusat Pembinaan Profesi Keuangan | 21.03 | 32.37 | 22.64 | 21.53 | 97.58 |
| 4 | Dit. Teknis Kepabeanaan | 19.48 | 32.37 | 21.81 | 21.49 | 95.14 |
| 5 | Direktorat Sistem Manajemen Investasi | 20.32 | 32.37 | 20.51 | 21.12 | 94.31 |
| 6 | Lembaga Pengelola Dana Pendidikan | 20 | 32.37 | 20.51 | 21.53 | 94.41 |
| Nilai Akhir dan Zona | | | | | 95.83 | |
| Kategori | | | | | | A |
| Opini | | | | | | Kualitas Tertinggi |

Figure 5 Public Service Compliance Award, Year 2022

3.8. AI-Based Risk Profiling System (SiProko-AI)

SiProko-AI is an innovation designed to assess the risks of business actors using a data-driven Artificial Intelligence (AI) system. This system automatically categorizes the risks of prospective tender providers into low, medium, or high categories based on



historical data. Additionally, SiProko-AI offers supplementary information to support tender evaluations, assists in determining qualified tender winners, and provides an early warning system that is beneficial for the Contracting Officer (PPK) in contract management. The implementation of SiProko-AI at the UKPBJ of the Ministry of Finance is scheduled to begin in 2025.

The main benefit of SiProko-AI lies in its ability to map the risks of potential goods/services providers, thereby minimizing the likelihood of project execution failures during the contract stage. This system shifts the procurement management approach from manual risk identification to data analytics-based decision-making using AI. Consequently, it enhances work efficiency and effectiveness while reducing operational costs, such as those incurred from on-site checks.

SiProko-AI significantly impacts the procurement process by making it more efficient and transparent. The system enables faster services that are responsive to market changes and stakeholder needs. With accurate information, SiProko-AI improves decision-making quality, resulting in better and timely procurement of goods and services.

3.9. Procurement Knowledge Management System (Pro KMS)

Pro KMS is an innovative system designed to provide a quality knowledge-based platform for all stakeholders in the procurement of goods and services, including Authorized Budget Users (KPA), Contracting Officers (PPK), Procurement Officials, and suppliers. The primary objective of this system is to enhance the competencies and skills of procurement actors, enabling them to carry out their tasks more effectively and efficiently.

Developed in response to the need for a comprehensive and easily accessible knowledge management system, Pro KMS supports efforts to improve the quality of procurement at the UKPBJ of the Ministry of Finance. This system offers knowledge aligned with the latest regulatory developments and adopts a digital knowledge management approach, allowing flexible access without spatial and temporal constraints.

Pro KMS also aids in automating knowledge management processes, reducing operational costs, and optimizing human resource utilization. By providing access to knowledge management through Pro KMS, procurement stakeholders can enhance their competencies, contributing to the creation of more efficient, transparent, and high-standard procurement processes. This system is designed to support the long-term vision of developing procurement human resource competencies, making it a key solution in shaping professional and competitive human resources.

3.10. Embracing Digital Years (EDY)

EDY is an innovative initiative from the UKPBJ of the Ministry of Finance aimed at strengthening the understanding and implementation of procurement practices through digitalization. This platform offers various workshops, seminars, and discussions for procurement stakeholders, including Authorized Budget Users (KPA), Procurement Officials, Contracting Officers (PPK), and suppliers. Through EDY, participants can gain the latest insights into innovations in the procurement of goods and services, as well as the use of digital technology to enhance efficiency, transparency, and accountability.

The activities organized by EDY also facilitate knowledge and experience sharing among practitioners, encouraging the development of practical and innovative solutions relevant to current procurement challenges. This initiative helps optimize the use of



human resources, budgets, and existing infrastructure, thereby adding value to public services.

The digitalization initiatives promoted by EDY introduce significant advancements in the procurement processes of the Ministry of Finance. By automating workflows previously managed manually, EDY eliminates redundancies, reduces human error, and enhances operational efficiency. Automation streamlines tasks such as vendor selection, contract management, and payment processing, which were historically time-intensive and prone to inconsistencies. This reduction in manual interventions not only results in budget savings by minimizing administrative overheads but also allows resources to be allocated more strategically to core procurement activities. Additionally, EDY’s digital platforms transcend traditional spatial and temporal constraints, enabling procurement activities to be conducted from any location and at any time. This flexibility is particularly valuable in ensuring continuity of operations during disruptions, such as during the COVID-19 pandemic, or when coordination among geographically dispersed teams is required. By enabling real-time collaboration and decision-making, EDY improves the responsiveness and agility of the procurement system.

Moreover, the integration of digital tools under EDY enhances the overall quality of procurement services. Standardized processes and data-driven decision-making reduce inconsistencies and ensure compliance with regulatory frameworks, fostering transparency and accountability. Enhanced data analytics capabilities allow procurement officers to evaluate performance, optimize supplier relationships, and predict future needs more effectively.



Figure 6 EDY’s Project Documentation

3.11. Community of Practice (COP)

CoP (Community of Practice) is an innovative initiative designed to address challenges in the implementation of procurement practices for goods and services



through a collaborative and knowledge-based approach. This initiative allows procurement practitioners, such as PPK, KPA, and suppliers, to effectively share knowledge, best practices, and innovative solutions.

As the main platform for UKPBJ within the Ministry of Finance, CoP has also been utilized by various other ministries and agencies between 2017 and 2022, and it will continue to be implemented. The initiative evolves to meet current needs, focusing on enhancing collaboration, efficiency, and the quality of procurement.

Through CoP, procurement practitioners can learn from one another and collaborate, creating an environment that fosters innovation and competence development. This not only improves the quality of procurement for goods and services but also strengthens a reliable professional network to address future challenges.



Figure 7 CoP Documentation

CoP enables procurement actors to automate the learning process and knowledge sharing without the constraints of space and time, enhancing operational efficiency and budget management by allowing more flexible and effective access to information and collaboration.

The positive impacts of CoP include improved human resource competencies, increased efficiency in procurement processes, and enhanced transparency and accountability. Therefore, CoP not only strengthens the quality of procurement but also adds significant value to institutions and the public.



Overall, CoP creates an environment that supports innovation and competence improvement, ensuring that procurement processes are more efficient and transparent, resulting in better and more reliable outcomes.

3.12. Digital Payment Market Place (DigiPay)

DigiPay is a digital transformation innovation in the procurement payment system developed by the Directorate General of Treasury of the Ministry of Finance to facilitate government transaction processes. Since 2020, DigiPay has been utilized by several other ministries and agencies, refining the previous digital payment system with a focus on user-friendliness and integration with procurement systems.

This innovation provides significant benefits for Commitment Making Officials (PPK) and suppliers by automating payment processes that were previously conducted manually. The system offers real-time information on available budgets, payment history, and supplier performance, thereby enhancing efficiency and accuracy in budget management.

With DigiPay, human resources can work more efficiently, operational budgets can be saved, and transactions can be conducted anytime without spatial and temporal constraints. DigiPay was recognized as the best innovation in the Ministry of Finance in 2023 and is currently undergoing copyright registration. This innovation contributes to improved efficiency, transparency, and quality in procurement while supporting the competencies of KPA, PPK, and suppliers.

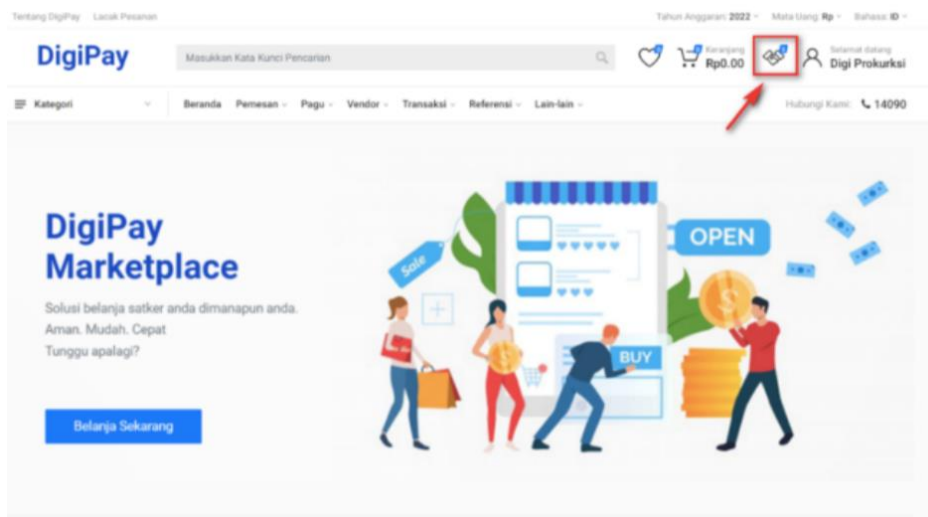


Figure 8 DigiPay Application Interface

3.13. Cost Project Management (Cost Pro)

Cost Pro is an innovative initiative that manages the partnership between the Ministry of Finance and Bank Himbara to address the financing issues faced by contractors, particularly regarding the working capital required for procurement contracts. This program provides contractors with easier and faster access to financing, helping them overcome working capital constraints that often hinder project implementation.

The tangible benefits of Cost Pro are experienced by various stakeholders, resulting in improved quality and efficiency in the procurement of goods and services. The program adheres to the principles of effectiveness and efficiency, optimizing available resources to



generate greater benefits in public service and budget savings. Cost Pro also helps improve work systems and supports contractors in completing projects more smoothly.

Additionally, Cost Pro has significant leverage in fostering awareness and a new mindset. The program creates a broad impact by making contract management and project financing more structured and measurable, thereby enhancing the overall procurement process within the Ministry of Finance.

3.14. Eco Office Certification (EOC)

EOC is an innovative initiative that integrates environmentally friendly procurement practices with sustainability principles in the procurement process of goods and services within the Ministry of Finance. This program aims to create a greener work environment by implementing procurement standards that prioritize products and services that support sustainability. EOC is an advancement of the Ministry of Finance's Eco Office policy, designed to encourage changes in the work systems of procurement actors and suppliers.

The significant benefits of EOC are felt by various units within the Ministry of Finance, as the program promotes more environmentally responsible procurement practices. Its impacts include a reduction in carbon footprint, energy efficiency, and more prudent resource use, ultimately enhancing the quality of life for the community. EOC also plays a role in promoting sustainable procurement by ensuring that every step in the procurement process considers environmental impacts.

EOC has substantial leverage in raising awareness and fostering a new mindset about the importance of sustainability in the workplace. The program has made a significant impact on the behaviour of procurement actors and suppliers, increasing institutional commitment to environmentally friendly procurement and triggering sustainable positive changes in society. Through EOC, the Ministry of Finance demonstrates a strong commitment to sustainability and environmental responsibility in every aspect of procurement.

4. Conclusions

The Digital Transformation Design for Procurement within the Ministry of Finance represents an innovative approach that does not merely replicate existing concepts. This transformation focuses on four main pillars to strengthen the Procurement Unit (UKPBJ) at the Ministry of Finance: changes in work patterns and governance, simplification of business processes, development of human resources, and the implementation of data-driven practices.

The first pillar includes the integration of the Center of Excellence (CoE) function, the centralization of procurement services, and regulatory reforms that support these changes. The second pillar emphasizes the automation of administrative procedures and the elimination of unnecessary bureaucracy. The third pillar focuses on enhancing human resource competencies through dynamic and agile planning. The fourth pillar leverages data analytics and artificial intelligence (AI) for smarter and more precise decision-making.

The implementation of these four pillars is carried out through five main initiatives: the digitalization of procurement processes, the enhancement of transparency and accountability, capacity building, collaboration and partnerships, and sustainability. These initiatives have resulted in eleven supporting innovations, including SIMPEL-NG, CMS,



S2MKI, HeCaB, SiProko-AI, Pro KMS, EDY, COP, DigiPay, Cost Pro, and EOC. These innovations ensure that the digital transformation of procurement is effective and efficient, providing sustainable positive impacts for the organization and all stakeholders involved in the procurement of goods and services.

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