

Building Up Inclusive Procurement Ecosystems through Digital Transformation

Edy Gunawan¹, Muhammad Iqbal Mutaqin²

¹Kepala Unit Kerja Pengadaan Barang dan Jasa, Kementerian Keuangan Republik Indonesia, Indonesia, ²Ahli Pertama Fungsional Pengelola Pengadaan Barang dan Jasa – Kementerian Keuangan Republik Indonesia, Indonesia.

Article Info	ABSTRACT				
Article History:	This paper delves into the design and implementation of digital transformation				
Received, Oct 09, 2024 Revised, Oct 16, 2024 Accepted, Oct 28, 2024	within the Procurement Unit of the Ministry of Finance of the Republic of Indonesia (UKPBJ Kemenkeu). The study underscores the pivotal role of digital transformation in enhancing efficiency, effectiveness, transparency, accountability, collaboration, and sustainability in the procurement processes of goods and services. The transformation is anchored on four main pillars:				
Keywords:	changes in work patterns and governance, simplification of business processes, development of empowered human resources, and the implementation of a				
Data-Driven Practices, Digital Transformation, Ministry of Finance, Procurement Unit, Public Sector.	data-driven approach. These pillars are actualized through five interrelated initiatives that have led to eleven synergistic innovations. The paper concludes that these innovations ensure the effectiveness and efficiency of the digital transformation of procurement, providing sustainable positive impacts for the organization and all stakeholders involved in the procurement of goods and services.				
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Corresponding Author:					

Edy Gunawan, Kepala Unit Kerja Pengadaan Barang dan Jasa, Kementerian Keuangan Republik Indonesia, Indonesia, Jl. Dr. Wahidin No. 1 Jakarta Pusat. Email: edy_gunawan@kemenkeu.go.id

1. INTRODUCTION

Digital transformation (DT) occurs when an organization leverage digital technologies to innovate or alter their existing business models and processes, or to facilitate changes in their organizational structures, resources, or interactions with both internal and external stakeholders (Vial, G. 2019). The integration of digital technologies impacts nearly every aspect of contemporary businesses, affecting areas such as production, organizational hierarchies, and relationships with partners, suppliers, and customers (Kretschmer et al.,2022).

Disruptive changes, which refer to transformations within a company and its operational landscape due to digitalization, can potentially render existing business models obsolete (Parviainen et al., 2017). These changes are often triggered by rapid or disruptive innovations in digital technologies, resulting in significant uncertainty. In response, industries and companies seek to adapt to these evolving environments through various strategies. For instance, government organizations may adopt e-services to keep up with private sectors.

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Agile and innovative businesses integrate transformation needs into their strategic planning to sustain their market positions. This approach allows them to seize new opportunities and enhance their resilience against risks (Bondar et al., 2017). The implementation of DT is crucial for maintaining competitiveness in a digital economy (Liu et al., 2011). Additionally, digitalization fosters productivity gains, cost efficiencies, and innovations that further influence DT (Hess et al., 2016). Various researchers across multiple fields have examined the opportunities and challenges associated with DT (Burton-Jones et al., 2020; Hai et al., 2021). Furthermore, DT not only transforms industries but also affects societies at large. As the significance of DT becomes increasingly evident, it is accompanied by heightened expectations.

Given the expanding scope and complexity of the DT topic, this paper aims to present the design of DT within the Procurement Unit of the Ministry of Finance of the Republic of Indonesia (Unit Kerja Pengadaan Barang/Jasa Kementerian Keuangan – UKPBJ Kemenkeu). The focus will be on integrating the procurement ecosystem to enhance efficiency, effectiveness, transparency, accountability, collaboration, and sustainability in the procurement processes of goods and services. These improvements are essential to support the national objectives of procurement, specifically the increase in domestic product (Produk Dalam Negeri – PDN) spending and the empowerment of Micro, Small, and Cooperative Enterprises (Usaha Mikro Kecil dan Koperasi – UMKK).

This paper is organized into several sections. The first section provides a literature review on digital transformation (DT), presenting its concept and its application within the context of the public sector. The following sections discuss digital transformation specifically in the Procurement Unit (UKPBJ) of the Ministry of Finance (Kemenkeu). Additionally, this article outlines the pillars and initiatives of digital transformation in the UKPBJ, as well as the products that have emerged from these initiatives.

2. RESEARCH METHOD

In recent years, the term "digital transformation" has gained considerable attention from both practitioners and scholars. Despite its growing usage, there remains a pressing need for conceptual clarity, particularly regarding its application within government and public organizations. While public and private entities share certain characteristics, they also possess significant differences. The objectives, values, and strategies of public organizations are predominantly aimed at enhancing the public good rather than maximizing revenue.

Consequently, it is crucial to frame our understanding of digital transformation within the specific context of government and public organizations. In this section, we will examine the concept of digital transformation and, drawing upon a literature review, we will clarify the distinctions between the terms "digitization," "digitalization," and "digital transformation." Furthermore, we will discuss how these concepts can be interpreted within the public sector.

2.1. Digitazion, Digitalization, and Digital Transformation

The terms "digitizing" and "digitization" are commonly employed interchangeably and are often defined as synonyms. While "digitizing" functions as a verb that denotes the action of converting analogue information into a digital format, "digitization" is categorized as a noun that refers to the process or result of this conversion. Despite their differing grammatical roles, both terms fundamentally describe the same phenomenon of transforming analogue data into a digital representation (Reis et al., 2019).

Currently, digitizing and digitization play a significant role in establishing new methods of working, communicating, and collaborating (Sanchez, 2017). The advancements resulting from these processes facilitate modifications in operational workflows and can influence business models, as they enhance the efficiency of data collection, communication, and control activities, making them more manageable and cost-effective (Sanchez, 2017). It is essential to note that, despite the potential outcomes associated with digitizing, both "digitizing" and "digitization" are still recognized as processes involving the conversion of physical objects into digital data (Reis et al., 2019).

Digitalization encompasses various processes (Denner et al., 2018), particularly its capacity to influence the management, control, and enhancement of material and information flows from suppliers to end users (Klötzer & Pflaum, 2017). Furthermore, some scholars contend that digitalization can either enhance or disrupt business models (Denner et al., 2018) and may even

impact an entire organization (Hausberg et al., 2019). Others assert that digitalization not only encapsulates the digital advancement within an organization but can also be applied in broader societal (Bockshecker et al., 2018) or institutional (Tilson et al., 2010) contexts. Additionally, digitalization has been characterized as the current status of an organization, institution, or society in relation to its ongoing digital evolution (Bockshecker et al., 2018) or as the process of integrating machines with information and digital technologies (Lenka et al., 2017). The term has also been defined as the process of adopting or augmenting the use of digital or computer technologies (Brennen & Kreiss, 2016), or more simply, as the implementation of digital media, such as computer and internet-based platforms (Bernhard-Skala, 2019).

Digital transformation refers to the process of altering organizations and societies through the adoption of digital technologies (Reis et al., 2018). These technologies may be either established or innovative, including but not limited to cloud computing, the Internet of Things, social media, and artificial intelligence. The implementation of digital transformation frequently results in the modification, enhancement, or even the creation of new business models (Culot et al., 2020), prompting businesses to reassess and adjust their strategies (Crowley et al., 2017). Consequently, digital transformation has the potential to influence entities at the organizational level (Vial, 2019). Furthermore, it can affect customers and their overall experience (Pihir et al., 2019), which elucidates its role in facilitating societal change (Reis et al., 2018).

Digital transformation and digitalization both utilize digital technologies to modify or enhance processes, rather than merely focusing on products. These processes are restructured and optimized to develop new capabilities (Brown & Brown, 2019) and to improve financial performance (Vial, 2019). Nevertheless, a key distinction between digital transformation and digitalization lies in the fact that the former adopts a more comprehensive approach (Teichert, 2019), resulting in changes that are more radical, significant, or profound (Babar & Yu, 2019).

2.2. Digital Transformation in a Government Context

A limited number of literature reviews specifically address digital transformation within governmental and public organizations. Although our definition of digital transformation encompasses both private and public sectors, the implications of this transformation can vary significantly in the context of government entities. First, these organizations feature intricate relationships involving various branches of government, civil society representatives, citizens, and other stakeholders. Modern societies are marked by complex issues that necessitate collaboration across multiple disciplines and stakeholders for effective resolution (Pereira et al., 2018). A radical transformation in such organizations could result in shifts in power dynamics within an already complex structure.

Second, government and public organizations have distinct objectives, including the management of serious social challenges (Pereira et al., 2018) and the enhancement of societal quality of life alongside the promotion of sustainable growth (Charalabidis & Lachana, 2020). Consequently, the best practices, as well as the reasons for both successes and failures, associated with digital transformation initiatives may differ from those identified in the private sector.

We contend that it is essential to integrate knowledge from the fields of information systems and eGovernment, aiming to harmonize the application of concepts rather than allowing them to evolve independently. Nevertheless, there remains a significant gap in research concerning digital transformation within the public sector, which should be prioritized in future studies to enhance the foundation of Digital Governance Science (Charalabidis & Lachana, 2020).

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. These risks can impact several dimensions, including stakeholders, technology, processes, culture, organizational structure, and strategic direction. 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:

a. The digitalization of the procurement process

The digitalization of procurement processes leverages technology to automate and monitor procurement, thereby reducing human errors and administrative duplication. This initiative has led to two key innovations: the next-generation direct procurement management information system (SIMPEL-NG) and the Ministry of Finance's contract management system (CMS).

b. Transparency and accountability

Transparency and accountability enhance information openness, preventing conflicts of interest and corruption. The enhancement of transparency has produced two innovations: the implementation of information security management system standards (S2MKI) and a helpdesk chatbot (HeCaB).

c. Capacity building

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Capacity building focuses on improving the professionalism of human resources involved in the procurement of goods and services, ensuring they possess the necessary knowledge and skills. The capacity-building initiative encompasses four innovations: an AI-based risk profiling system (SiProko-AI), a procurement knowledge management system (Pro KMS), the embracing digital years program (EDY), and a community of practice (CoP).

d. Collaboration and partnerships Collaboration and partnerships strengthen cooperation with stakeholders to create innovative and efficient solutions in procurement. Collaboration and partnerships have resulted in two innovations: the DigiPay marketplace (DigiPay) and cost project management (Cost Pro).

Sustainability Sustainability ensures that goods and services procured provide the best value not only in terms of cost but also in terms of their positive impact on society and the environment, while supporting sustainable practices. The sustainability initiative has led to the innovation of eco office certification (EOC).

3.3. Innovations of UKPBJ Kemenkeu

Eleven innovations resulting from these five initiatives are designed to work synergistically, ensuring that every aspect of the digital transformation of procurement is executed effectively and efficiently, while also providing a sustainable positive impact for the organization and the stakeholders involved in the procurement of goods and services.



Figure 2. Innovations of UKPBJ Kemenkeu

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.

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SURAT PENCATATAN CIPTAAN

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

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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.

3.4. 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.

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.





3.4. 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.

Period	rintah Pusat : Kementerian Keuangan le Observasi : Agustus - November 2022					
		Dimensi Penilaian				
No	Unit Layanan	Input	Proses	Output	Pengaduan	Nitar
1	Kantor Pusat DJKN : Dit. Lelang	20.26	32.37	20.73	21.53	94.8
2	Biro Manajemen BMN dan Pengadaan	22,13	32.37	22.64	21.53	98.6
з	Pusat Pembinaan Profesi Keuangan	21.03	32.37	22.64	21.53	97.5
4	Dit. Teknis Kepabeanan	19.48	32.37	21.61	21,49	95.1
5	Direktorat Sistem Manajemen Investasi	20.32	32.37	20.51	21.12	94.3
6	Lembaga Pengelola Dana Pendidikan	20	32.37	20.51	21.53	94.4
	Nitai Akhir dan Zon	18			95.83	
Kategori					Α.	
	Opini				Kualitas Tertinggi	



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

SiProko-AI is an innovation designed to assess the risks of business actors using a datadriven 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.

3.6. 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.

3.7. 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 promoted by EDY allows for budget savings through the automation of processes that were previously conducted manually, and enables activities to be carried out without spatial and temporal constraints. Thus, EDY directly contributes to achieving more effective and efficient procurement while improving the quality of procurement services within the Ministry of Finance.



Figure 6. EDY's Project Documentation

3.8. 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.

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.



Figure 7. CoP Documentation

3.9. 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

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3.10. 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.

3.11. 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. CONCLUSION

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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