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Optimizing Enterprise Architecture: The Role of TOGAF in Driving Organizational Transformation

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ABSTRACT

The rapid development of technology in this era does not rule out the possibility that every organization needs information technology as a medium to support the organization in achieving its goals. In the implementation of TOGAF, PT. Pos Indonesia follows the steps specified by the framework. First, they conduct an in-depth analysis of the needs and goals of the company. It involves understanding the organization's vision, mission, and business strategy as well as identifying areas of improvement that can result through implementing enterprise architecture. PT. Pos Indonesia conducts an inventory of its current architectural assets and resources, including IT infrastructure, applications, data, and business processes. It helps them in understanding the strengths and weaknesses present in their enterprise architecture. During the implementation phase, PT. Pos Indonesia implements the changes identified in the transformation plan. They integrate new technology solutions, improve business processes, and migrate data according to the desired enterprise architectural design. PT. Pos Indonesia conducts continuous monitoring and management of their corporate architecture. They ensure that the architecture is constantly relevant to business and technological changes taking place, and involve necessary updates and adjustments. Through the implementation of TOGAF, PT. Pos Indonesia can improve operational efficiency, increase adaptability to change, and accelerate their transformation initiatives. The framework assists them in integrating new technologies, improving service delivery, and increasing value for their customers.

1. INTRODUCTION

The increasingly rapid development of information technology in the digital era has changed the way organizations carry out their activities (Hermawan, 2020; Prihatma & Nurhayani, 2024). Nearly every organization today relies heavily on information systems to accelerate work processes and support strategic decision-making. Therefore, information technology planning is required that is not only technical but also integrates with the organization's business needs (B. Kurniawan, 2011; Sumitro et al., 2023). Thus, the existence of information systems serves not only as a tool but also as a primary driver in achieving an organization's strategic goals. This provides a crucial basis for companies in various sectors, including the service and logistics sectors, to design information system architectures that align with their business vision.

PT Pos Indonesia (Persero) is a state-owned enterprise engaged in courier, logistics and financial services, which continues to transform to remain relevant in the digital era (Munajah Nasution & Aslami, 2022). Service transformation has been achieved through various innovations, such as the development of the PosPay application, online package tracking services, Express Mail Service (EMS), and

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international delivery services. However, amidst these developments, PT Pos Indonesia faces challenges in the form of customer demands for faster, more transparent services, and the ability to compete with other digital logistics providers (Bankauskaite, 2019; Tannady, 2020). This situation demands a reliable and integrated information system to ensure service continuity. Therefore, thorough architectural planning is required to ensure PT Pos Indonesia's digital service innovations can meet market needs while strengthening the company's competitiveness.

Enterprise Architecture (EA) is present as an approach that is able to bridge business needs with information systems in an organization. According to Ayu (2024), Changes to one subsystem without planning can disrupt the harmony of the system as a whole. Meanwhile, Alwadain (2020) The situation is that EA encompasses a master plan that regulates aspects of business, operations, automation, and technology infrastructure. In line with this, the CIO Dumitriu & Popescu (2020) states that an architectural framework is an important guideline for developing a focused information system. This theoretical foundation suggests that PT Pos Indonesia needs to adopt an enterprise architecture to optimize system integration while maintaining the continuity of its business strategy.

Despite digitizing its services, PT Pos Indonesia's systems and services still require better architectural planning to align with the company's business strategy. The PosPay system architecture, for example, needs to be designed to be accessible anytime and anywhere, thereby increasing customer satisfaction and expanding market reach (Nur et al., 2023; Sulistiyani et al., 2024). Without a clear architecture, there is a risk of misalignment between business strategy and technology infrastructure, and even potential disruption to the performance of existing systems (Maulana et al., 2023). Therefore, the key gap that must be addressed is how to develop an enterprise architecture that can support business needs while delivering reliable digital services to customers.

Various frameworks have been developed to assist organizations in designing enterprise architecture, including the Zachman Framework, FEAF, and TOGAF. Research conducted by Camatti et al. (2020) and Fadlil et al. (2021), The results show that TOGAF ADM is superior to other frameworks because it meets all the comparison criteria, including management aspects and structured implementation stages (Kandjani et al., 2013). TOGAF also offers advantages in terms of openness, effectiveness, and adaptability to the specific needs of an organization Ishiyama (2014; Wiyana & Winarno, 2015) This makes TOGAF the right choice for PT Pos Indonesia to design an enterprise architecture that supports the optimal development of PosPay.

Considering these conditions, an appropriate enterprise architecture design is required to support the development of the PosPay system at PT Pos Indonesia. This planning is expected to ensure alignment between business strategy and the company's information technology infrastructure. Furthermore, the right architecture will improve the quality of digital services, potentially driving a 30% increase in market share. This urgency underscores the relevance of research on enterprise architecture design using TOGAF to address PT Pos Indonesia's strategic needs.

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2. METHODS

Qualitative method is a research approach used to understand social phenomena and human behavior through in-depth analysis, interpretation, and the exploration of complex contexts (Sugiyono, 2018). This method focuses on understanding meanings, subjective interpretations, and individual experiences within a broader context. In the TOGAF research at PT. Pos Indonesia, the author conducted a literature review (library research) to collect data from readings and performed interviews with sources working at PT. Pos Indonesia. The analysis method employed is based on the Open Group Method (TOGAF ADM) framework, which consists of 10 (ten) phases.

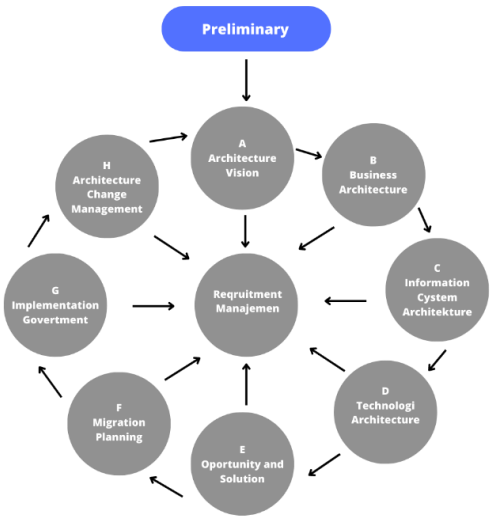

Figure 1. Analysis Method

a. Preliminary
Preliminary refers to something that is done, prepared, or initiated as an initial step before more advanced actions or activities. It generally serves as a preparatory or introductory phase before reaching the main steps or stages.
b. Architecture Vision
Architecture Vision is an early step in the process of developing enterprise or system architecture. It is a document that describes the desired vision and goals for the system to be developed or updated. The Architecture Vision helps formulate guidelines and general directions for the architecture team, stakeholders, and other interested parties.
c. Business Architecture
The main goal of Business Architecture is to provide a holistic view of the business structure and how the organization operates. It involves identifying and modeling business elements, including business units, functions, processes, relationships between units and processes, and the information used in business operations.
d. Information Cystem Architecture
The purpose of Enterprise System Architecture is to create a consistent and integrated framework for the development, implementation, and management of information systems within the organization. This architecture involves modeling and documenting both technical and business components of the system, as well as the relationships and interactions between them. This enables the organization to achieve its business goals effectively and efficiently through the use of information technology.

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e. Tecnology Architecture
Technology Architecture aims to organize and align the organization's IT infrastructure, software, and other technological platforms to support the organization's business objectives.

f. Oportunity and solution
The Opportunity and Solution phase is crucial in guiding the development direction of enterprise or system architecture. It helps the organization identify opportunities, address challenges, and optimize benefits through the implementation of appropriate solutions. In this stage, identified opportunities can be transformed into solution concepts, which serve as the basis for subsequent development and implementation phases.

g. Migration Planning
Migration Planning involves planning and preparing to transfer or move systems, applications, or technological infrastructure from one environment to another. Migration can include moving from one platform to another, data transfer between locations, or updates to existing software or systems.

h. Implematation Govertment
Implementation Governance is key to achieving government objectives and delivering the expected benefits to the community. It involves careful planning, effective coordination, meticulous execution, continuous monitoring, and the ability to adjust steps as needed.

i. Architecture Change Manajemen
Architecture Change Management is a discipline within enterprise architecture development that deals with managing changes occurring in system architecture, business processes, or organizational technology infrastructure. The goal is to manage and coordinate changes related to architecture, ensuring that these changes are implemented effectively and appropriately.

j. Reqruitment Manajemen
Recruitment Management is the process of managing and organizing activities related to recruiting new employees within an organization. Its purpose is to attract, assess, select, and hire individuals who meet the organization's needs.

3. RESULTS AND DISCUSSION

Based on the information you provided, PT. Pos Indonesia in one of East Java's cities, Malang, has 13 counters serving payments and mail/item deliveries. However, there is a difference in handling shipments over 2 kg, as these are managed in a separate room from the other 13 counters. Previous research shows that some customers mistakenly choose the wrong counter after queuing. Several customers who are supposed to send items end up queuing at counters designated for payments and letter or package deliveries on a single line. To address this issue, PT. Pos Indonesia could consider several steps:

1) Customer Education: PT. Pos Indonesia can provide clear information to customers about the division of counters based on the service type offered. This can be done through notices at the counters or announcements in public areas.
2) Provision of Guidance Staff: PT. Pos Indonesia can place staff in the queue area to assist customers in determining the appropriate counter based on their service needs.
3) Improved Signage and Directions: PT. Pos Indonesia can enhance signs and instructions around the queue area, counters, and the separate room for shipments over 2 kg. This will help customers identify the correct counters for their needs.
4) Reevaluation of Room Design: PT. Pos Indonesia can reassess the layout and arrangement of counters to ensure that the setup is intuitive and clear for customers.

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By taking these steps, it is hoped that customers in Malang will find it easier to locate and use the appropriate counters for their required services, reducing customer errors in choosing counters, and improving overall service efficiency at these counters. The ongoing PosPay service process at PT. Pos Indonesia involves several steps as follows:

1) Queue Number Assignment: When a customer arrives to perform a transaction using PosPay, they are given a queue number by an officer or through an automatic queue machine if available.
2) Queue and Call for Queue Number: Customers wait in line according to their queue number. PT. Pos Indonesia calls the queue numbers sequentially to guide customers to available counters.
3) Interaction with Service Officer: After being called, the customer interacts with the PosPay officer. The officer will inquire about the customer's needs, such as the type of payment or delivery desired, as well as gather the necessary information and data for the transaction.
4) Verification and Transaction Processing: The officer verifies the data provided by the customer, such as the payment amount, delivery address, or recipient information. After verification, the transaction is processed using the appropriate system.
5) Payment or Delivery: If the customer is making a payment, they will be asked to pay the specified amount through available methods like cash or card. If the customer is sending an item, they will provide the item and necessary delivery information.
6) Receipt or Proof of Transaction: After completing the transaction, the customer receives a receipt or proof of the transaction as confirmation of the payment or delivery made.

This process may vary depending on the type of PosPay service requested by the customer. PT. Pos Indonesia strives to deliver efficient and accurate service to customers, with the goal of ensuring that payment or shipment transactions are carried out smoothly and meet customer needs. Below are some recommendations to improve the business process of PosPay services at PT. Pos Indonesia:

1) Digital Queue System: PT. Pos Indonesia can consider implementing a digital queue system that allows customers to easily take a queue number using electronic devices, such as touch screens or mobile applications. This will help reduce wait times and facilitate queue management.
2) Staff Training: It is important to provide training to PosPay service staff so they can serve customers more efficiently. Training can focus on good communication skills, in-depth product knowledge, and the use of necessary software and systems for transaction processes.
3) Enhancement of Information Systems: PT. Pos Indonesia can update or improve the information systems used in PosPay services. This includes ensuring that the system can handle various types of payments and shipments, provide notifications or status updates on transactions to customers, and securely store customer data.
4) Customer Empowerment: PT. Pos Indonesia can consider empowering customers by providing more self-service options. For example, installing automated payment machines or introducing mobile applications that allow customers to perform transactions easily on their own. This can reduce the workload of staff and speed up the service process.
5) Use of Advanced Technology: PT. Pos Indonesia can explore the use of advanced technology in the PosPay service process. For example, implementing digital payments using e-wallet applications or QR codes, which can speed up transactions and offer more payment options to customers.
6) Customer Feedback and Measurement: It is important to regularly measure customer satisfaction and gather feedback regarding the PosPay service process. This can be done through

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surveys, interviews, or online reviews. This information can help PT. Pos Indonesia identify areas that need improvement and implement the necessary enhancements.

By implementing these recommendations, PT. Pos Indonesia can improve the efficiency and quality of PosPay services, provide a better customer experience, and strengthen its position as a trusted provider of payment and delivery services.

Table 1. Comparison between the current PosPay service process and the proposed business stage

No.	Current Process	Proposed Process
1	Prospective customers receive a queue number on a single line without differentiation between those who will pay and those who will ship.	An integrated information system: Update the information system used to manage customer queues. Ensure the system can distinguish between prospective customers who will pay and those who will ship. With an integrated system, service staff can easily recognize each customer's service needs.
2	When queuing, customers must wait in a single line for both shipment and payment.	Implement a queue management system that can differentiate between customers coming for payment and those coming for shipment. This can be done by using separate counters or areas for each service. The system can assign customers to the appropriate counter based on their needs.
3	When customers make payments or ship items, the same counter is used.	Set specific time schedules to serve customers coming for payments and those for shipments. For example, the first few hours of the day could be dedicated to payments, and the following hours to shipments. This allows customers to better plan their visits.
4	Counter staff always ask about the customer's purpose: payment or shipment.	Provide an initial identification mechanism that allows counter staff to know the customer's purpose before approaching the counter. This can be through a special identification tag or a brief question asked to the customer before they reach the counter. This way, staff can prepare the appropriate guidance before the customer arrives.
5	All counters serve all transactions.	Manage customer wait times to keep efficiency and minimize delays. Consider increasing the number of staff or speeding up transaction processes so customers do not have to wait too long at the counter. Regularly evaluate the service process and gather feedback from customers. Use this information to continuously improve efficiency and service quality.

The research results show that the PosPay service at the Malang branch of PT. Pos Indonesia still faces challenges in queue management and service allocation, primarily due to the lack of separation between payment and delivery services at the counter. This leads to customer confusion and decreased service efficiency. Therefore, several improvements are needed, such as customer education, the

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placement of directing officers, an enhanced digital queue system, and improvements to the service area design. Furthermore, the implementation of technologies such as e-wallets and self-service applications can speed up the transaction process and reduce staff workload (Y. Kurniawan & Jesica, 2024). These recommendations aim to improve the customer experience, accelerate service processes, and strengthen PT Pos Indonesia's position in the increasingly competitive logistics and digital payment services market.

4. CONCLUSION

PT Pos Indonesia (Persero) officially adopted its current name in 1995. Previously, it operated under the name PTT (Posts Telegraaf end Telefoon Diensts) starting in 1906; then it changed to Djawatan PTT (Pos Telegraph and Telephone) in 1945; later, it became a State-Owned Company (Perusahaan Negara) under the name PN Postel in 1961; then further transformed into PN Pos & Giro in 1965; and finally became Perum Pos dan Giro in 1978. Corporate architecture provides a comprehensive expression of the company, including a master plan that functions as a guiding force among aspects such as business planning (goals, vision, strategy, and governance principles), operational aspects (terminology, organizational structure, tasks, activities, and business information), automation aspects (information systems and databases), and business infrastructure technology. Requirements serve as inputs at each phase of the TOGAF ADM (Architecture Development Method) to define the target architecture, ensuring that the resulting target architecture aligns with the initial needs identified. The qualitative method is a research approach used to understand social phenomena and human behavior through in-depth analysis, interpretation, and the uncovering of complex contexts. Training can focus on good communication skills, in-depth product knowledge, and the use of software and systems necessary for transaction processes.

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