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**Migration Success Strategy and Implementation of Enterprise System: A Case Study on PT. XYZ Biller Message Switching and Aggregator Service Merger Work from Home****Oristania Wahyu Nabasya<sup>1</sup>, Teguh Raharjo<sup>2</sup>, Darell Hendry<sup>3</sup>, Fakhira Devina<sup>4</sup>**

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**Abstract****Purpose** – The purpose of the research is to determine the strategy for the successful implementation of Biller Message Switching and Aggregator carried out by organizations with multicultural employees during work from home conditions.**Methodology** – The method used in this research was a summative evaluation with the research subjects of the merger of Bank X, Bank Y, and Bank Z. Research subjects were chosen because of the success of the development team in integrating enterprise systems to support the merger process carried out during the pandemic.**Results** – The results of the research concluded that the ES implementation strategy during the pandemic required consistency, actively documenting each process, over-communicating, and using the appropriate SDLC method.**Originality** – This research conducted a thematic analysis on the process of integrating and migrating ES companies that merged during the pandemic.**Contribution** – This research contributes to organizations that want to integrate and migrate ES during the pandemic. For academics, research can serve as a foundation for future research in developing theories of ES implementation in virtual or pandemic environments.

## **A. Introduction**

Information technology is no longer just a support system from some points of view, but already acts as an enabler of the banking business [1]. Enterprise System (ES) is closely related to a company's information technology [1]. A merger or acquisition defines the merger of two (or more) companies into one company, which includes acquisitions or other forms of a merger. Increasingly fierce competition in the business environment encourages companies to carry out various mergers for their business expansion, such as horizontal, vertical, or conglomerate mergers [2]. Through the merger, the company hopes to gain financial, operational, and managerial benefits [2]. Indonesia is the largest Muslim country in Asia, but Islamic banks are still hoarded by other conventional banks. Therefore, in 2021, the Ministry of Finance initiated the merger or merger of several Islamic banks. In the merger process, many aspects must be further standardized, especially in the information technology department. In that year, the COVID-19 pandemic in Indonesia was at its peak [3].

The COVID-19 pandemic has caused a digital transformation, and all work activities must be carried out remotely, which causes the enterprise system migration process to be used in uncharacteristic conditions [3]. Due to these circumstances, companies must independently change their business models to survive, and their information technology departments must develop their information systems effectively and flexibly adapt to such changes [4]. Previous ES implementation research has only covered normal conditions and has not specifically discussed the implementation strategies carried out during the pandemic. In the case of a remote merger or work from home (WFH) several challenges may occur, especially in the enterprise system migration process. Therefore, the existence of several new adjustments in WFH conditions can affect the success of enterprise system implementation. In this study, an observation of the factors that affect the implementation of the enterprise system will be carried out in a case study of bank mergers in a work from home state.

This paper is divided into several parts. The first part is discussed as the introduction to the research topic. Then, the second part is a discussion of previous research. Next, the third part is the research method we use. Next, the fourth part discusses the results and discussion, and the last part is the conclusion.

## **B. Research Method**

### **A. Types of Research**

The type of research used in this study is summative evaluation research. Summative evaluation research is used to understand the strategies already used during the process of developing and migrating enterprise system merger banks in depth. The study also identified what challenges occurred during the enterprise system development and migration process during the pandemic and how the development team overcame these challenges.

### **B. Research Subject**

This research takes the form of a case study conducted on the merger of Bank X, Bank Y, and Bank Z that recently occurred in Indonesia. The choice of subject was based on the success of the development team in integrating enterprise systems to support the merger process that was carried out during the pandemic.

### C. Data Collection Techniques

To obtain data for research preparation, we use the following techniques:

a. Interview: We conducted a semi-structured interview with the development team leader and one of the development team members involved in the implementation and migration of the Bank's enterprise system merger. The leader of the development team was chosen as the resource person because he knows in outline and detail every process that occurs during development and has direct authority over every decision made during the development process. We interviewed one member of the development team for validation and opinions from other parties who also followed the development process.

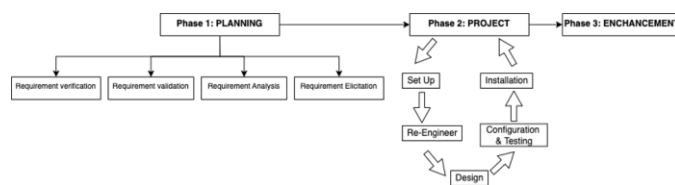
b. Documentation Review: We studied documents created by the development team to support the use of the new enterprise system and migration guidance from the previous enterprise system. In addition, we also studied the training materials provided by the development team to institutions that will become enterprise system users.

### D. Data Collection Techniques

We mapped the data obtained from the interview process and documentation review into several themes based on the ES Implementation Process Model. The ES Implementation Process Model that we use refers to the PPM ES Implementation Process Model, which is combined with activities in the Software Requirement Engineering Framework to detail the activities carried out in the planning phase, which can be seen in Figure 2. We describe the activities carried out, challenges encountered, steps taken by the development team to overcome these challenges, and the final strategy used to successfully develop and migrate enterprise systems in each phase of PPM ES Implementation.

### E. Data Analysis Techniques

We mapped the data obtained from the interview process and documentation review into several themes based on the ES Implementation Process Model. The ES Implementation Process Model that we use refers to the PPM ES Implementation Process Model, which is combined with activities in the Software Requirement Engineering Framework to detail the activities carried out in the planning phase, which can be seen in Figure 2. We describe the activities carried out, challenges encountered, steps taken by the development team to overcome these challenges, and the final strategy used to successfully develop and migrate enterprise systems in each phase of PPM ES Implementation.



**Fig 1.** Merging the Project Phased Model (PPM) with the Software Requirements Engineering Framework

## **C. Result and Discussion**

### ***A. Implementation Preparation Phase***

In the implementation preparation phase, we use the software requirements engineering framework to classify the processes described by the informants. This phase begins with the selection of vendors to manage enterprise system needs after the three banks merge. Each vendor presented the functions offered to the three banks. Vendors are selected based on the most secure function for the migration process and adaptation to legacy systems. After the vendor has been selected along with the relevant stakeholders, a new requirement verification is carried out according to the standards of each bank. Because each bank that participated in the merger has an institution that will be a client for the implementation of this ES migration, verification is also carried out with the institution at the bank. Once the need for a potential process that the institution will undertake with the ES has been verified, it must be validated with the standards that exist in the three merging banks to determine whether they will be suitable and what kind of standards can include a secure transaction process for the three banks after the merger. After validation, requirement analysis is carried out to find out what kind of implementation is needed to adjust the requirements. From the analysis, it was finally decided that several types of implementation include customization according to the needs of the institution.

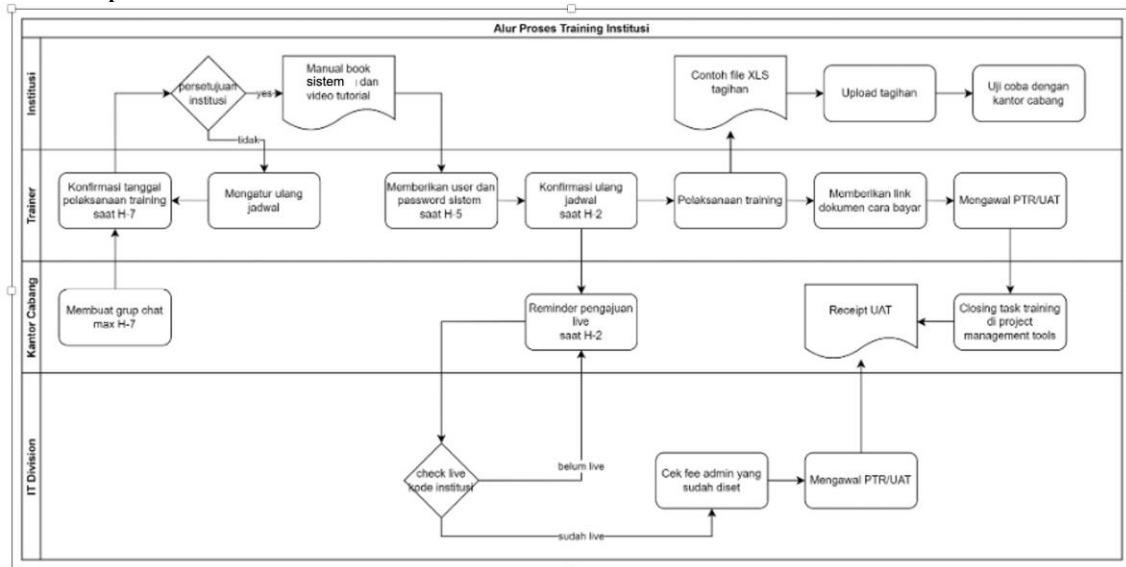
### ***B. Implementation Phase***

Before performing the implementation, each client must fill out a form to determine the type of implementation or migration to be performed or what kind of customization is required. There are guidelines to help clients choose what type of implementation is needed. Implementation is carried out in 1,300 institutions, which are institutions that will integrate with the merged bank, which was previously integrated with the three banks before the merger. The implementation is offered based on the standards already determined in the previous phase, but there are some adjustments that will be matched to the existing conditions of the institution. This implementation phase is carried out remotely, and developers sometimes also adjust to the needs of the institution; for example, there are cases where developers have to install a raspberry pie server at the institution. In addition, the implementation phase uses an agile method, namely scrum. The implementation is divided into several sprints, and each day the developers will convey their respective progress in a daily stand-up session held for fifteen to thirty minutes.

### ***C. Implementation Phase***

After implementation is complete and the system is able to go-live, users at each institution must first learn how to use this new system through training. Training is also carried out remotely, starting with the bank branch office creating a group on the chat application with trainers from the vendor. There is some bureaucracy for conducting training, as shown in Figure 3. Seven days before training, the trainer must confirm the training schedule. After that, the institution will see if the schedule fits; if it does, the institution will be given a username and

password, as well as a manual book and system video tutorial, five days before the training. Two days before the training, the schedule will be reconfirmed, and the link for the training session will be provided online. During the training, the trainer will explain according to the manual book provided and also demonstrate the end-to-end process.



**Fig 2. Training Process Diagram**

#### D. Development Strategy Discussion

From the phases described in the previous sub-chapter, several development strategies have been implemented to adapt to a pandemic situation that requires working remotely:

1. Consistently use documentation according to its format for giving assignments. For example, dividing tasks to manage institutions.
2. Each process or activity is documented in detail and completely.
3. Online communication in a structured format.
4. Using the software development lifecycle (SDLC) method according to the circumstances and development needs.
5. Actively confirm every decision to the parties involved so that there is no miscommunication. For example, during training, ensuring everything is done remotely.

Several bottlenecks resulted from these strategies, for example, when the training institution in question was not present, the branch office did not know which institution needed to be trained, and so on.

#### D. Conclusion

This paper aims to analyze the migration process and strategies for the success of the enterprise system implementation process in a work-from-home situated during this pandemic. The case studies used for this research are the mergers of Banks X, Y, and Z. We analyzed by interviewing vendor owners who implemented enterprise systems for banks that had merged. In the preparation phase for the implementation, the activities that occur are vendor selection and verification, validation, and requirements analysis, and it is concluded that several types of

implementations include customization according to the needs of the institution. The implementation phase was carried out remotely at 1,300 institutions using the Scrum method. After the implementation is complete and the system is operational, users at the institution are trained. From these three phases, we found that there were several strategies implemented for the successful implementation of this ES in remote conditions, although there were also some bottlenecks. This research contributes to organizations wishing to integrate and migrate ES during a pandemic. For academics, research can serve as a foundation for future research into theories of implementing ES virtually or in pandemic conditions.

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