



Management Information System for Stock Control at CV. Agus Mandiri

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ARTICLE INFO

Received : 14 August 2026
Accepted : 15 September 2026
Published : 12 October 2026

KEYWORDS

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ABSTRACT

Inventory management is essential to maintaining the continuity of construction projects, particularly in ensuring the availability and accuracy of material stock information. At CV Agus Mandiri, inventory recording was previously performed manually using notebooks and unintegrated spreadsheets, leading to recording errors, data duplication, delays in information retrieval, and discrepancies between physical and administrative stock. This research aims to develop a web-based Stock Control Management Information System (SIMKAS) to improve the effectiveness, accuracy, and control of inventory management at CV Agus Mandiri. The research employed the Waterfall development method, consisting of Planning, Analysis, Design, and Implementation stages. Data were collected through observation and interviews, while system modeling and database design were conducted using UML and a relational database model. The system was developed using the CodeIgniter (CI) Framework, MySQL, and Bootstrap 5. The results show that SIMKAS successfully supports integrated inventory management, including material tracking, stock transactions, stock monitoring, user access control, and activity recording. Functional evaluation using Black Box Testing demonstrated that all tested scenarios produced valid results. The contribution of this research is an integrated web-based inventory control system that improves the accuracy and accessibility of inventory information while supporting stock control and traceability in construction-service operations.

Keywords: Inventory Management, Stock Control, Management Information System, Web-Based System, Stock Card, CodeIgniter.

1. INTRODUCTION

Information technology plays an important role in supporting organizational operations, particularly in managing data, business processes, and managerial information. Management information systems enable data to be collected, processed, stored, and presented as useful information for operational activities and decision-making [1], [2]. In inventory management, information systems can improve the accuracy, efficiency, and availability of inventory information while reducing the risks associated with manual recording. Effective inventory management is important because organizations need to maintain an appropriate balance between material availability and operational requirements [3], [4]. Warehouse activities

involve receiving, storing, issuing, and monitoring goods; therefore, accurate and timely inventory information is essential for maintaining operational continuity [5]. Previous studies have addressed inventory optimization using approaches such as Economic Order Quantity and Just in Time [6], as well as Safety Stock and Reorder Point to reduce the risk of stockout [7]. These studies demonstrate that effective inventory control depends on accurate, timely, and reliable inventory information. The need for reliable inventory information becomes more critical when inventory recording is performed manually using notebooks or unintegrated spreadsheets. Such practices may cause human errors, data duplication, difficulties in tracking inventory movements, delays in report preparation, and discrepancies between physical stock and administrative records. Information systems can



improve the accuracy, consistency, and availability of organizational information [8], [9], while accounting information systems emphasize the importance of reliable transaction data for organizational control [10]. Similar problems were identified at CV Agus Mandiri, a construction-service company whose operations depend on the availability of materials for multiple construction projects. Based on observations and interviews conducted in this research, incoming and outgoing goods were recorded using notebooks and simple spreadsheets without a centralized and integrated database. Consequently, monitoring material availability, tracking inventory movements, searching for records, and preparing inventory reports required additional effort and were vulnerable to inconsistencies. These conditions indicate the need for an inventory control system that is not only capable of recording transactions but also able to relate material movements to project activities.

Previous studies on inventory information systems have generally focused on computerized inventory transactions, stock recording, and inventory reporting, while other studies have incorporated specific control mechanisms to improve inventory accuracy and security. In terms of project-based material tracking, existing systems do not consistently provide a mechanism for associating inventory movements with specific projects, which is particularly relevant to construction-service companies. Stock Card functionality is commonly used to record historical stock movements and calculate inventory balances, but its integration with project-based tracking is not always addressed. Similarly, minimum-stock warnings can support early identification of potential shortages, yet this feature is often implemented independently from project-related inventory management. From the perspective of access control, Role-Based Access Control (RBAC) can restrict system functions according to user responsibilities, while Audit Log can provide traceability of user activities; however, these mechanisms are not necessarily integrated with project-based inventory transactions in a single platform. Therefore, although previous studies have established important foundations for inventory management, warehouse management, inventory optimization, information-system development, and web-based applications [3], [5]–[19], there remains a contextual gap in integrating project-based material tracking, Stock Card, minimum-stock monitoring, RBAC, and Audit Log within one inventory-control system designed specifically for the operational characteristics of a construction-service company. This gap indicates the need for an integrated system that connects inventory transactions with project activities while simultaneously supporting stock monitoring, access control, and activity traceability.

Based on this gap, this research proposes the development of a Stock Control Management Information System (SIMKAS) for CV Agus Mandiri. The system is designed to transform the existing manual inventory process into an integrated computerized process that connects item data, project data, incoming and outgoing transactions, material returns, stock balances, and inventory reporting. In addition, the system incorporates Stock Card, minimum-stock monitoring, RBAC, and Audit Log to support inventory supervision, user authorization, and transaction traceability. The system is developed using the CodeIgniter (CI) Framework, MySQL, and Bootstrap 5. UML is used to model system requirements and processes, while a relational database model is applied to organize the inventory data [15], [16]. The proposed system is therefore designed according to the operational requirements of a construction-service company rather than as a general-purpose inventory application.

The scientific contribution of this research should be distinguished from its contextual contribution. The research does not claim methodological or technological novelty in the individual use of web technology, RBAC, Audit Log, or inventory transactions. Instead, its primary contribution is the adaptation and integration of established inventory-control concepts into a project-based construction-service environment. The system provides a unified platform in which material transactions can be associated with project activities while stock balances, historical movements, minimum-stock conditions, user permissions, and user activities can be monitored within the same information environment. This contextual integration is intended to address the operational gap between conventional inventory recording and the specific material-control requirements of construction projects.

The objective of this research is to design, develop, implement, and evaluate a web-based inventory management system that can replace the manual inventory recording process at CV Agus Mandiri. The system is expected to improve the accuracy and accessibility of inventory information, facilitate inventory transaction management and reporting, support project-based material tracking, strengthen stock supervision, and improve the traceability of user activities. System functionality is evaluated using Black Box Testing to determine whether the implemented functions operate according to the specified requirements. Through this approach, the research contributes an application-oriented inventory control solution tailored to the operational characteristics of a construction-service company.

2. METHOD

2.1. Research Design

This research employed a system development approach to design and implement a web-based Stock Control Management Information System (SIMKAS) at CV Agus Mandiri. The research focused on transforming the company's manual inventory management process into an integrated computerized system. The research was conducted at CV Agus Mandiri, Jakarta, over a period of six months in 2026. The research data consisted of information related to inventory management, including item data, project data, incoming and outgoing goods transactions, warehouse activities, stock information, user responsibilities, and inventory reporting requirements. Data were collected through direct observation and semi-structured interviews with personnel involved in inventory and administrative activities. A total of 3 informants participated in the interviews, consisting of Agung as warehouse leader, M. Aristan as Manager, and Agus Tri Susanto as Company Director. The informants were selected based on their direct involvement in inventory-related activities and their responsibilities in the existing business processes. The interview with the company director, Agus Tri Susanto, focused on the company's inventory-management procedures, operational problems, reporting requirements, and management expectations regarding the proposed system. Interviews with administrative and warehouse personnel focused on daily inventory activities, including item recording, receiving and issuing goods, stock monitoring, project-related material use, and reporting procedures. The interviews were conducted using a semi-structured format, allowing the researcher to use predefined topics while providing opportunities for informants to explain operational conditions and problems in greater detail. Each interview lasted approximately 15 -30 minutes.

Observation was conducted directly in the warehouse to examine the actual processes of receiving, storing, issuing, and monitoring materials. The observations were documented through field notes, process descriptions, and documentation of the forms or records used in the existing inventory process. The collected observation and interview data were subsequently compared to identify similarities, differences, problems, and information requirements in the existing business processes. The results were organized into process descriptions and requirement specifications, which were then used as the basis for defining the functional and non-functional requirements of SIMKAS.

2.2. Data Collection and Analysis

The data collection process consisted of observation and semi-structured interviews. Observation was conducted directly at the warehouse to identify the actual procedures for receiving, storing, issuing, and monitoring inventory. Particular attention was given to how inventory information was recorded, how materials were associated with projects, how stock balances were determined, and how inventory reports were prepared. The observations

were recorded in field notes and process documentation to provide a representation of the existing workflow.

Semi-structured interviews were conducted with 3 informants representing management, administrative, and warehouse responsibilities. The principal interview topics included: (1) the current inventory-recording process; (2) procedures for receiving and issuing goods; (3) project-related material tracking; (4) stock monitoring and Stock Card requirements; (5) inventory reporting; (6) user responsibilities and access requirements; (7) problems and risks associated with manual recording; and (8) expectations for the proposed information system. The interview results were documented and analyzed together with the observation findings.

The collected information was converted into system requirements through a requirements-analysis process. First, the existing business processes were identified and described based on observation and interview findings. Second, problems and limitations in each process were identified. Third, each identified problem was translated into one or more system requirements. For example, difficulties in monitoring historical stock movements were translated into the requirement for a Stock Card, while the risk of issuing materials beyond available stock was translated into a stock-quantity validation requirement. The need to distinguish system access according to responsibilities was translated into Role-Based Access Control (RBAC), while the need to trace user activities was translated into an Audit Log requirement. The resulting requirements were then classified into functional and non-functional requirements and used as the basis for system design.

The functional requirements included role-based access for Superuser, Office Administrator, and Warehouse Staff; project management; item master-data management; incoming and outgoing inventory transactions; warehouse-location information; Stock Card; inventory movement reports; minimum-stock information; digital project archives; and validation of outgoing transactions based on available stock. The non-functional requirements included data security, responsive interfaces, system usability, and data consistency.

The research used the Waterfall method as the system development approach. Waterfall was selected because its development process is systematic and sequential, with each stage completed before proceeding to the next stage. This approach was considered appropriate because the principal system requirements had been identified at the beginning of the research and were sufficiently defined based on the results of observation and interviews. In this study, the Waterfall method was adapted into four main stages, referred to as PADI: Planning, Analysis, Design, and Implementation. The research and system development procedure is illustrated in Fig. 1. The procedure began with data collection through direct observation and semi-structured interviews to identify the existing inventory processes, operational problems, and system requirements. The identified requirements were then processed through four sequential stages of the adapted Waterfall model, referred to as PADI: Planning, Analysis, Design, and Implementation. The Planning stage defined the system scope, objectives, feasibility, and

development schedule. The Analysis stage translated the findings from the existing business processes into functional and non-functional requirements. The Design stage produced the system models, database structure, system architecture, and user-interface design. The Implementation stage involved system development, integration, and functional testing using Black Box Testing. The final output of the procedure was a web-based Stock Control Management Information System (SIMKAS) tailored to the inventory-management requirements of CV Agus Mandiri.

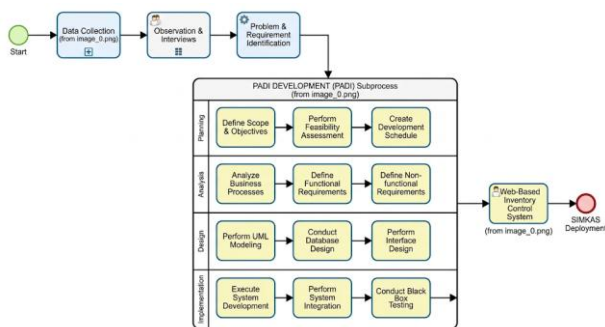


Fig. 1. Research and System Development Procedure

2.2.1. Planning

The Planning stage was conducted to determine the scope, objectives, feasibility, and development schedule of the system. The main problems at CV Agus Mandiri were identified based on preliminary observations and interviews, particularly the limitations of manual inventory recording, difficulties in obtaining accurate stock information, and the risk of incomplete or inconsistent project-related records.

A qualitative feasibility assessment was conducted from three perspectives: technical, operational, and economic feasibility. Technical feasibility was assessed based on the availability of computer devices, local development infrastructure, web browsers, and supporting software required to operate the proposed system. Operational feasibility was assessed based on the suitability of the proposed workflow with the responsibilities and capabilities of the intended users, particularly the Superuser, Office Administrator, and Warehouse Staff. Economic feasibility was assessed by considering the use of open-source technologies and the potential reduction of manual recording and reporting activities. Each feasibility aspect was assessed descriptively based on the conditions identified during observation and interviews rather than through a numerical scoring model. The assessment indicated that the proposed system was feasible to develop because the required technical infrastructure was available, the system functions were aligned with existing operational activities, and the use of open-source technologies reduced additional software costs. A development schedule was subsequently prepared to organize the research activities, including data collection, requirements analysis, system design, implementation, testing, and system installation.

2.2.2. Analysis

The Analysis stage translated the results of observation, interviews, and the qualitative feasibility assessment into system requirements. The analysis first identified the existing inventory processes and their limitations and subsequently defined the functions required to address the identified problems. The analysis also considered the responsibilities of different user roles to ensure that system access corresponded to organizational duties.

The main functional requirements identified in this stage were user authentication and role management, project management, item master-data management, incoming and outgoing inventory transactions, warehouse-location information, Stock Card, inventory movement reports, minimum-stock information, digital project archives, and stock validation. The stock validation mechanism was defined to prevent outgoing transactions when the requested quantity exceeded the available stock. In addition, security requirements were defined through Role-Based Access Control (RBAC), while activity traceability requirements were addressed through an Audit Log. These requirements became the basis for the system design and implementation stages.

2.2.3. Design

The Design stage translated the requirements into a technical system design covering the database, system architecture, system processes, and user interface. The database was designed as a relational database using an Entity Relationship Diagram (ERD) to represent relationships among entities such as users, items, projects, transaction headers, and transaction details. System behavior and interactions were modeled using Unified Modeling Language (UML), consisting of Use Case Diagram, Activity Diagram, Sequence Diagram, Class Diagram, and Deployment Diagram. The user interface was designed using Bootstrap 5 to provide a consistent and responsive layout for important pages, including the login page, administrator dashboard, transaction forms, and inventory reports.

The design also defines two main operational actors, namely Office Administrator and Warehouse Staff. The Office Administrator is responsible for project administration and digital project archiving, while Warehouse Staff is responsible for item management, incoming and outgoing transactions, and inventory reporting. The resulting system architecture and database design were subsequently used as the basis for implementation.

2.2.4. Implementation

The Implementation stage transformed the system design into a functional web application. The application logic was developed using CI Framework, with the code organized modularly to separate business logic from the presentation layer. The database design was implemented using MySQL through the XAMPP environment. Database tables were created with appropriate primary keys and foreign keys to maintain data relationships and integrity. The user interface was integrated using HTML, CSS with Bootstrap 5, and JavaScript, supported by jQuery, SweetAlert2, and DataTables for dynamic interaction,

notification, and data-table management. The system was also configured with authentication, Role-Based Access Control, and Audit Log mechanisms.

The implemented system contains inventory functions for recording incoming and outgoing goods, managing item and project data, displaying warehouse locations, generating Stock Card and inventory reports, and identifying items with low stock levels. The Stock Card applies a running-balance calculation in which the ending balance is determined from the initial balance, incoming quantity, and outgoing quantity. The research subsequently verifies the implementation through functional testing.

2.3. System Testing

System testing was performed using the Black Box Testing method. The testing focuses on the functional behavior of the application by examining the relationship between input and expected output without examining the internal source-code structure. The test scenarios included login validation, empty-field validation, insufficient-stock validation, project selection for outgoing transactions, duplicate item-code validation, unauthorized page access, Stock Card reporting, running-balance calculation, and Audit Log recording.

The evaluation criteria were based on whether the actual system output corresponded to the expected output for each test scenario. For example, the system was tested to ensure that an outgoing transaction exceeding available stock was rejected, unauthorized users were prevented from accessing restricted pages, the Stock Card calculation produced the same ending balance as the manual calculation, and user activities were correctly recorded in the Audit Log. All tested scenarios reported in the research were categorized as Valid/"Sesuai Harapan", indicating that the implemented functional requirements operated according to the specified requirements.

3. RESULT AND DISCUSSION

3.1 System Implementation

The research resulted in the implementation of a web-based Stock Control Management Information System (SIMKAS) at CV Agus Mandiri. The system was developed to replace the previous manual inventory recording process with an integrated computerized system. The implementation covers inventory master data, project management, incoming and outgoing inventory transactions, warehouse-location information, Stock Card, inventory reports, digital project archives, user authentication, Role-Based Access Control (RBAC), and Audit Log. The system was implemented using CI, MySQL, HTML, CSS, JavaScript, and Bootstrap 5.

3.2 Inventory Control and Stock Card

One of the main results of the implementation is the availability of an integrated Stock Card that records inventory movements and provides the current stock balance. The Stock Card applies a running-balance calculation based on the relationship between the initial

stock, incoming transactions, and outgoing transactions.

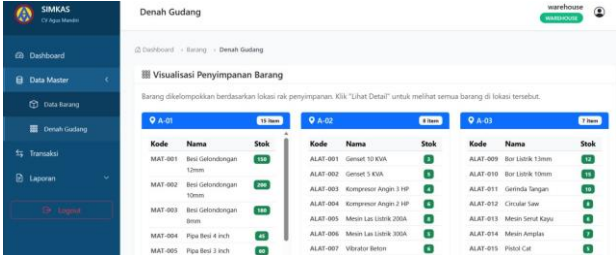
The calculation used by the system is:

$$\text{Ending Stock} = \text{Beginning Stock} + \text{Incoming Stock} - \text{Outgoing Stock}$$

The implementation was verified by comparing the system calculation with manual calculations. The testing results showed that the ending balance generated by the system was identical to the manual calculation, indicating that the Stock Card calculation function operated according to the specified requirements.

The Stock Card also supports filtering based on a specified date range. When there are no transactions within the selected period, the system displays an empty transaction table and maintains the beginning balance at zero according to the test scenario. This functionality provides a more structured mechanism for tracing inventory movements than the previous manual recording process.

The implementation also provides a stock report that identifies current inventory and items whose stock is approaching the minimum level. This information can support inventory supervision by allowing warehouse personnel to identify inventory conditions earlier. Thus, the system does not only record transactions but also provides information that can be used for inventory monitoring.



Kode	Nama	Stock	Kode	Nama	Stock	Kode	Nama	Stock
MAAT-001	Besi Galvanis 12mm	100	ALAT-001	Gemet 10 KVA	5	ALAT-009	Bor Listrik 12mm	25
MAAT-002	Besi Galvanis 10mm	200	ALAT-002	Gemet 5 KVA	5	ALAT-010	Bor Listrik 10mm	25
MAAT-003	Besi Galvanis 8mm	300	ALAT-003	Kompresor Angin 3 HP	5	ALAT-011	Gemetk Sangan	5
MAAT-004	Pipa Besi 4 inch	50	ALAT-004	Mesin Las Listrik 200A	5	ALAT-012	Cincin Sear	5
MAAT-005	Pipa Besi 2 inch	100	ALAT-005	Mesin Las Listrik 300A	5	ALAT-013	Mesin Sear Kayu	5
			ALAT-006	Mesin Las Listrik 300A	5	ALAT-014	Mesin Ampas	5
			ALAT-007	Vibrator Beton	5	ALAT-015	Pistol Cat	5

Fig. 1. SIMKAS Dashboard



Fig. 2. Stock Report and Minimum Stock Monitoring

3.3 Transaction Validation

The implemented system includes validation mechanisms to maintain inventory data integrity. One of the important validations concerns outgoing goods transactions. When a user attempts to record an outgoing transaction with a quantity greater than the available stock, the system rejects the transaction and displays a warning that the available stock is insufficient. The test results classified this scenario as Valid/"Sesuai Harapan".

The system also requires the destination project to be selected when the transaction type is **Outgoing Goods**. If the project is not selected, the system prevents the transaction from being saved and identifies the project field as required. This validation is important because outgoing material in the research context is associated with construction projects.

Another validation is applied to item master data. The system prevents the addition of a new item when its item code already exists in the database. The duplicate code is rejected through the database's unique constraint. These validation mechanisms contribute to reducing duplicate data and preventing invalid inventory transactions.

3.4 Security and Data Accountability

The system implements authentication and access control to protect inventory information. Direct access to restricted administrative pages without authentication is blocked by the system. When an unauthenticated user attempts to access an administrative page directly through its URL, the system destroys the session and redirects the user to the login page. The corresponding test scenario was classified as valid.

The implementation also applies Role-Based Access Control (RBAC). Access permissions are determined according to the user's role and responsibilities. For example, when a user with the Warehouse Staff role attempts to access the project-management page through a URL, the system detects that the user does not have the required authorization and rejects the request. This mechanism reduces the possibility of unauthorized modification of administrative and project data.

In addition to RBAC, the system implements an Audit Log to record important user activities. The testing scenario involved a Superuser deleting project data and subsequently checking the Audit Log. The system successfully recorded the user ID, the DELETE action, and the corresponding event time. The implementation therefore provides not only access control but also traceability of user activities, which is important for maintaining inventory-data accountability.

3.5 Functional Testing Results

The implemented system was evaluated using Black Box Testing, which examines system behavior based on input and output without evaluating the internal source code. Testing covered authentication, transaction validation, data validation, access control, reporting, Stock Card calculations, and Audit Log functionality.

The tested scenarios included incorrect login credentials, empty login fields, insufficient stock during outgoing transactions, missing project selection, duplicate item codes, unauthorized access without login, unauthorized access based on user roles, Stock Card filtering, Stock Card

balance calculations, and Audit Log recording. All reported scenarios were categorized as Valid/"Sesuai Harapan", as presented in Table 1.

Table 1. Table Styles

No.	Functional Test	Result
1	Incorrect username/password	Valid
2	Empty username and password	Valid
3	Outgoing transaction exceeding stock	Valid
4	Outgoing transaction without destination project	Valid
5	Duplicate item code	Valid
6	Direct access without login	Valid
7	Unauthorized access based on RBAC	Valid
8	Stock Card with no transactions	Valid
9	Stock Card ending-balance calculation	Valid
10	Audit Log recording	Valid

The testing results indicate that the implemented functions operated according to the specified requirements. In particular, the validity of Stock Card calculations confirms that the system can maintain running inventory balances, while successful transaction validation demonstrates that the system can enforce basic inventory-control rules. The successful RBAC and authentication tests indicate that access restrictions operate according to the defined user roles, and the successful Audit Log test demonstrates that selected user activities can be traced.

Nevertheless, the Black Box Testing results should be interpreted within the scope of functional verification. A valid result indicates that a function produced the expected output for the tested scenario; it does not by itself demonstrate long-term improvements in productivity, user satisfaction, inventory accuracy in actual operations, or reduction in material shortages. Therefore, the findings support the conclusion that SIMKAS is functionally consistent with its requirements, while broader operational impacts would require further evaluation using quantitative performance indicators and longer-term implementation data.

Overall, the results demonstrate that SIMKAS addresses the principal weaknesses of the previous manual inventory process by centralizing inventory information, automating stock-balance calculations, validating inventory transactions, and controlling access to system functions. More importantly, the system integrates these mechanisms with project-based material tracking. This distinguishes the contribution of the research from simply replacing paper-based records with a web application. The system provides a contextual adaptation of established inventory-

management and information-system practices to the operational requirements of a construction-service company.

The findings also support the research gap identified in the Introduction. Project-based material tracking, Stock Card, minimum-stock monitoring, RBAC, and Audit Log are brought together within one inventory-control platform. Although each mechanism is individually established in information-system practice, their integration in a project-oriented construction-service context provides an application-level contribution by addressing the specific relationship between warehouse inventory and construction-project requirements. Therefore, the principal contribution of this research is the contextual integration and implementation of inventory-control mechanisms rather than methodological or technological novelty.

4. CONCLUSION

This research resulted in the development and implementation of a web-based Stock Control Management Information System (SIMKAS) at CV Agus Mandiri to address limitations in the company's previous manual inventory management process. The system transforms inventory recording from notebooks and unintegrated spreadsheets into a centralized computerized system and integrates item data, project data, incoming and outgoing goods transactions, warehouse locations, Stock Card, inventory reporting, and digital project archives. The implementation provides a more structured and centralized approach to managing inventory information in a construction-service environment.

SIMKAS supports inventory control by providing integrated information on inventory movements and current stock conditions. The Stock Card applies a running-balance calculation based on beginning stock, incoming transactions, and outgoing transactions, with results consistent with manual calculations in the tested scenarios. The system also validates outgoing transactions against available stock and provides minimum-stock information to support inventory monitoring. These functions address important limitations of the previous manual process, particularly the difficulty of tracking inventory movements and maintaining consistent stock information.

The implementation also incorporates Role-Based Access Control (RBAC) and Audit Log to support access management and activity traceability. System access is controlled according to user roles, while selected user activities are recorded in the Audit Log. Black Box Testing showed that the tested functional scenarios, including authentication, transaction validation, duplicate-data prevention, unauthorized-access control, Stock Card calculation, and Audit Log recording, operated according

to the specified requirements and were categorized as Valid/"Sesuai Harapan". These results demonstrate the functional feasibility of the proposed system, although they do not by themselves establish long-term improvements in productivity, usability, or inventory accuracy in actual operational conditions.

The main contribution of this research is not the introduction of a new inventory-management algorithm or information technology, but the contextual adaptation and integration of established inventory-control mechanisms for a project-based construction-service environment. SIMKAS combines project-based material tracking, inventory transactions, Stock Card, minimum-stock monitoring, transaction validation, RBAC, and Audit Log within a single web-based platform. This integration provides an application-oriented solution for connecting warehouse inventory activities with construction-project requirements and addresses the contextual gap identified in the previous research.

This research has several limitations. The evaluation was primarily based on functional testing using Black Box Testing and did not include User Acceptance Testing (UAT) involving multiple warehouse and administrative staff. In addition, systematic usability evaluation, performance testing under varying workloads, and comprehensive security testing were not conducted. The current system also does not provide real-time notifications, barcode or QR-code integration, or a dedicated mobile interface. Future research should therefore evaluate the system through UAT involving representative users, conduct usability, performance, and security assessments, and investigate the integration of real-time stock notifications, barcode/QR-code technology, and mobile interfaces. These developments could further improve the usability, scalability, responsiveness, and operational applicability of SIMKAS in construction-service inventory management.

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