

Audit Application of Premium Quality Information System Using Audit Through the Computer Method

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Kata Kunci:

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Abstrak

Audit sistem informasi dilakukan untuk mengetahui sejauh mana pengelolaan sistem informasi di perusahaan apakah sudah sesuai dengan prosedur dan standar yang telah ditetapkan atau belum. Sistem informasi bertujuan untuk memperlancar setiap pekerjaan. Maksud dan tujuan penelitian ini adalah untuk menilai dan mengevaluasi pengendalian internal atas sistem informasi yang berjalan di suatu perusahaan dan memperbaikinya apakah sudah sesuai prosedur dan standar yang telah ditentukan. Metode yang digunakan dalam pengumpulan informasi dilakukan dengan wawancara, observasi dan penyebaran kuesioner kepada pengguna sistem. Metode yang digunakan adalah Audit Melalui Komputer. Kemudian dapat dilihat hasil audit sistem informasi Premium Quality Information (PQI) di Pabrik 5 PT. Parkland World Indonesia tepat Rekomendasi Audit Sistem Informasi melalui analisis yang digunakan sudah baik dan memadai dalam mendukung pencapaian visi dan misi perusahaan dengan baik serta dihasilkannya solusi strategis guna menyelesaikan berbagai permasalahan yang dihadapi. Hasil penelitian ini menemukan bahwa sistem yang digunakan belum memenuhi kebutuhan perusahaan, masih terdapat kendala yang membuat sistem tidak digunakan.

Key Word:

Application Audit, Premium Quality Information System, Computerized, Tollgate Quality Control.

Abstract

Information system audits are carried out to determine the extent of information system management in the company whether it is in accordance with established procedures and standards or not. Information systems aim to expedite every job. The purpose and objective of this study is to assess and evaluate internal control over information systems that run in a company and correct whether according to predetermined procedures and standards. The method used in collecting information is done by interviewing, observing and distributing questionnaires to system users. The method used is Audit Through the Computer. Then it can be seen the results of the Premium Quality Information (PQI) information system audit at Factory 5 PT. Parkland World Indonesia on the right Information System Audit recommendations through the analysis used are good and sufficient in supporting the achievement of the vision and mission of a company properly and the production of strategic solutions in order to solve the various problems faced. The results of this study found that the system used has not met the needs of the company, there are still obstacles that make the system not used.

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INTRODUCTION

Given the limitations faced by companies regarding the ownership of information resources and technology, their ability to maintain a controlled market is significantly impacted. Consequently, many companies are satisfied with their existing information systems, often neglecting the importance of auditing these systems. However, auditing information systems is crucial for supporting a company's growth and development. It helps the company understand whether the current system remains relevant and meets the organization's needs.

IT audits play a vital role in enhancing information security, improving operational efficiency, and supporting strategic decision-making. They provide valuable insights to management and help build a robust IT infrastructure (Sigit Auliana. Et al. 2024). Key areas evaluated during an IT audit include access controls, data backup procedures, change management processes, and overall IT governance. This comprehensive

evaluation helps organizations identify and address potential vulnerabilities, ensuring compliance with relevant laws and regulations, such as GDPR and HIPAA (Infosec Institute, 2021; Linford & Co., 2023).

The landscape of information systems audits has evolved significantly from the early days of electronic data processing to modern cybersecurity practices. Factors influencing these audits include the business environment, technological advancements, and global sociopolitical trends. Organizations today prioritize innovation and creativity, heavily relying on IT and digital technologies for efficiency and growth. This evolution necessitates continuous adaptation in IT audit practices to stay relevant and effective (ISACA, 2022).

One example of a company utilizing an information system is PT. Parkland World Indonesia, which operates in the footwear sector. The company uses the Premium Quality Information (PQI) system to record shoe defects. This computerized defect recording system allows quality information to be updated in real-time, ensuring quick and accurate data for Tollgate QC Finishing (TQC). The PQI system facilitates the input of shoe defect reports, Right First Time (RFT) production targets, PO Numbers, and other relevant information, enhancing the company's ability to manage and respond to quality control issues efficiently.

Auditing this system is essential to ensure its effectiveness and address any issues that may arise, such as delays in PO Number entries or discrepancies in production targets. Regular IT audits can help PT. Parkland World Indonesia identify and mitigate these issues, ensuring the PQI system continues to meet the company's needs and supports its quality control processes effectively (Infosec Institute, 2021; Linford & Co., 2023).

Emphasize the importance of high-quality information systems in managing and improving business processes. They highlight that accurate and timely information is critical for decision-making, operational efficiency, and maintaining competitive advantage (Laudon and Laudon. 2020). In the context of a manufacturing facility like Factory 5 at PT. Parkland World Indonesia, implementing a Premium Quality Information (PQI) system can enhance quality control, streamline production processes, and ensure compliance with industry standards (Sigit Auliana. Et al. 2024).

Discuss the role of information systems in improving organizational performance. They note that quality information systems provide reliable data that can be used to monitor performance, detect issues early, and implement corrective actions. For Factory 5, a PQI system can help in detecting defects in products, managing inventory effectively, and optimizing production schedules (Stair and Reynolds. 2021).

Explore strategic approaches to using information systems to achieve business goals. They argue that premium quality information systems can provide a strategic advantage by enabling better resource management, enhancing customer satisfaction, and reducing operational costs. For PT. Parkland World Indonesia, deploying a PQI system at Factory 5 can lead to improved product quality and customer trust. (Pearlson, Saunders, and Galletta. 2019).

Provides a comprehensive overview of statistical methods for quality control in manufacturing. He emphasizes the importance of using statistical tools to detect and correct quality issues in real-time. A PQI system at Factory 5 can incorporate these statistical methods to continuously monitor production quality and implement process improvements ((Montgomery 2019)).

Discuss principles of quality management and the implementation of effective quality control systems. They highlight that integrating quality information systems into manufacturing processes can help in achieving high standards of product quality. For Factory 5, a PQI system can provide detailed insights into production metrics and quality parameters, enabling proactive quality assurance (Juran and De Feo. 2017).

Dale, Van Der Wiele, and Van Iwaarden (2016) focus on the management of quality in various industries, including manufacturing. They emphasize that quality information systems are essential for monitoring, controlling, and improving product quality. Implementing a PQI system at Factory 5 can facilitate continuous quality improvement and ensure that the products meet customer expectations and regulatory requirements.

Heizer, Render, and Munson (2020) provide case studies on the application of quality management systems in manufacturing operations. They illustrate how companies have successfully implemented quality information systems to enhance operational efficiency and product quality. For Factory 5, a PQI system can serve as a case study in improving manufacturing processes and achieving operational excellence.

Slack and Brandon-Jones (2018) discuss the implementation of operations management strategies, including quality management systems, in various industries. They provide examples of how information systems have been used to optimize production processes and ensure product quality. Implementing a PQI system at Factory 5 can help in achieving similar outcomes by leveraging technology for quality management.

Jacobs and Chase (2018) explore the role of information systems in manufacturing planning and control. They emphasize that quality information systems are critical for managing production schedules, inventory,

and quality control. A PQI system at Factory 5 can integrate these aspects, providing a holistic approach to managing manufacturing operations and ensuring high-quality outputs.

METHODOLOGY

The steps of the system analysis method are as follows:

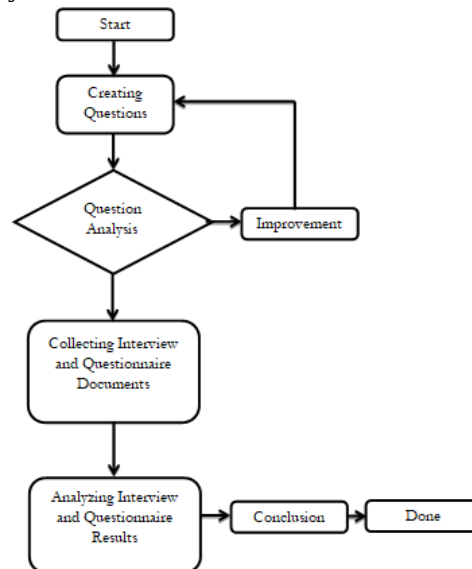


Figure 1. System Analysis Method

The first step in conducting a system research analysis is to identify and understand the problems within the company. When starting the analysis, several stages will be passed, namely: (1) creating questions for interviews and questionnaires, (2) re-analyzing the questions to be asked, (3) making improvements if there are any shortcomings, (4) collecting interview and questionnaire documents, (5) analyzing the results of the interviews with the respondents, and (6) drawing conclusions from the findings of the interviews.

Analisis

Unified Modeling Language

The following is the use case diagram of the workflow for the current Premium Quality Information (PQI) system, as follows:

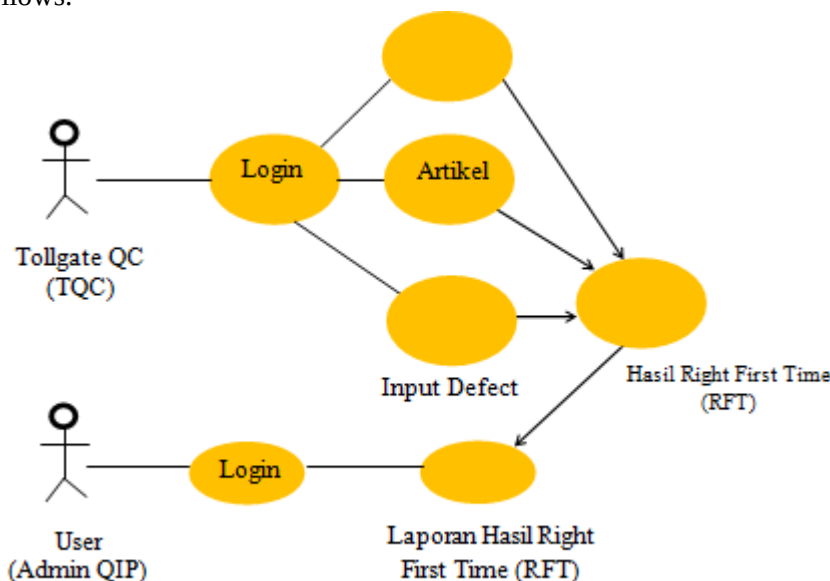


Figure 2. Use Case Diagram of the Current System

Activity Diagram of the Current System

The following is the activity diagram of the current Premium Quality Information (PQI) system, starting from the initial input process to the output, as follows:

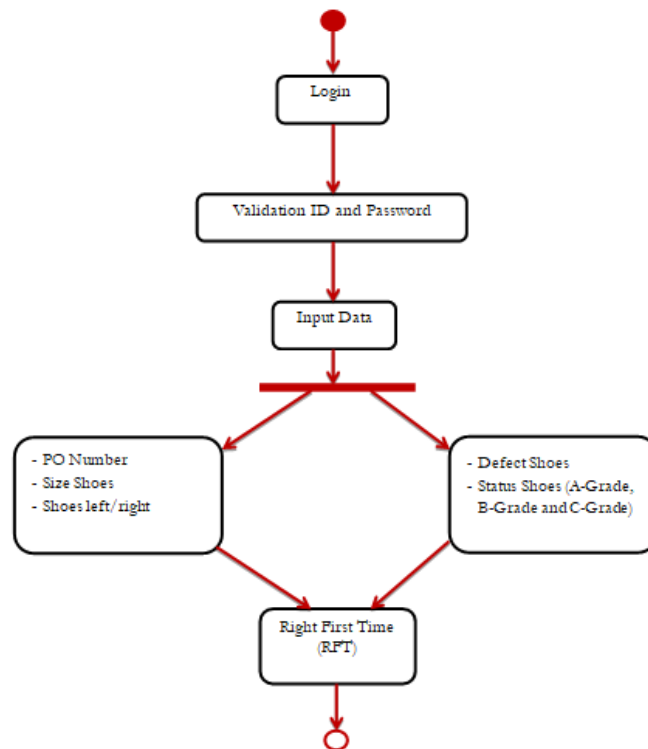


Figure 3. Activity Diagram of the Current System

Problems Encountered

Based on the ongoing system research, the issues frequently occurring in the Premium Quality Information (PQI) application are as follows: 1) The slow Wi-Fi network access causes delays in the input of PO Numbers into the system, resulting in the defect entries not being immediately displayed. It takes about 30 minutes for the PO Number to appear in the Premium Quality Information (PQI) system; 2) There are discrepancies between the production targets displayed on the packaging user's computer and the Premium Quality Information (PQI) application system, where ideally, the targets displayed should be consistent as they are interrelated; 3) Right First Time (RFT) does not appear in the Premium Quality Information (PQI) system. This issue occurs most frequently in Factory 5 due to the distant signal access to the system, causing the Right First Time (RFT) data to not immediately appear on the screen.

Alternative Solutions

Based on the problems described above, the following solutions are proposed: 1) Adding more Wi-Fi networks can stabilize and speed up the system, considering the current network is quite distant from Factory 5. The network must be shared with other factories that are closer to the central Wi-Fi; 2) The computers in the packaging (production) area will be interconnected so that the production targets and Tollgate Quality Control (TQC) will be consistent. This will prevent discrepancies in target results between the packaging computers and the Premium Quality Information (PQI) application system; 3) After adding a dedicated Wi-Fi network for Factory 5, the system will run quickly and stably, allowing the Right First Time (RFT) to appear on the screen promptly; 4) The barcode scanning system in the packaging area will be connected through a database managed by the relevant management team. This will ensure that the data displayed in the Premium Quality Information (PQI) system at the Tollgate Quality Control (TQC) matches the data in the packaging system.

Preliminary Inspection

To obtain information about the system under study during the preliminary inspection, the researcher conducts field inspections and makes notes of the findings. The activities carried out during the field inspection include: 1) Performing an initial check on the system currently running at Factory 5 of PT. Parkland World Indonesia; 2) Trying out the system to deepen the researcher's observation of the Premium Quality Information (PQI) system; 3) Recording any user system issues encountered during the field inspection.

This preliminary inspection is conducted to familiarize the researcher with the system to be audited, including its condition and any limitations that might affect the audit. During the preliminary inspection, it is crucial to document data as audit material and to synchronize the interview results with the respondents,

particularly the Tollgate Quality Control (TQC) users, to gather accurate data and information about the Premium Quality Information (PQI) system.

Follow-Up Inspection

After the preliminary inspection, the follow-up inspection phase, which is the second stage of the audit, is conducted. In this stage, the researcher collects data and evidence from relevant parties through interviews and observations of the running system and related documents. However, the research will focus more on the system application itself rather than collecting related documents. The researcher also uses questionnaires with 11 (eleven) Tollgate Quality Control (TQC) Factory 5 users who utilize the Premium Quality Information (PQI) system. The questionnaire is used to provide clear evidence related to the system.

During the field inspection, the researcher will monitor the system by logging in directly and trying to use the system from start to finish to continue the next observation. The third phase, reporting, involves compiling the results of stages 1 and 2 into attachments containing the observations and interviews with relevant parties. This report will discuss the system issues encountered during use.

Inspection Results

The inspection results are akin to the final audit stage, providing evidence that can be used for reporting. From the inspection of the Premium Quality Information (PQI) system, several issues were identified. If these issues are resolved, it will make it easier and more comfortable for Tollgate Quality Control (TQC) to use the system. One frequent problem is the slow entry of PO Numbers into the system, disrupting TQC tasks because they must wait 30 minutes for the PO Number to appear in the system. This delay causes work to pile up when new PO Numbers need to be inputted, as they should not have to wait for minutes after entering the PO Number. The researcher will present the inspection results, highlighting data entry delays through the system and some input display issues, which will be discussed in the inspection results section.

FINDINGS AND DISCUSSION

Log In to Premium Quality Information (PQI)

This is the initial screen before accessing the Premium Quality Information (PQI) system. To proceed to the data entry process, you must enter your ID, Password, Factory, Building, and Cell according to your respective work area. After entering the necessary information, click "OK" to access the system.

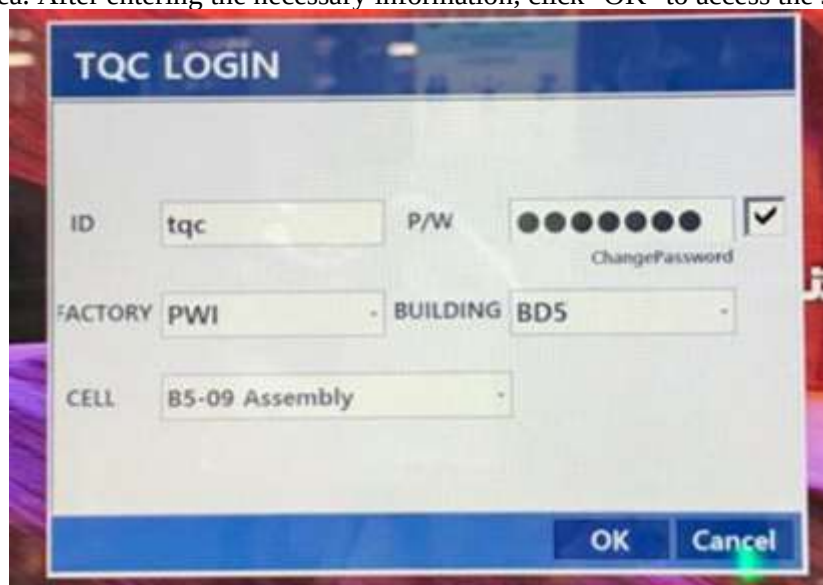


Figure 4: Audit Finding 1

Table 1. Audit Finding 1

Audit Finding	Condition	Recommendation
Finding 1	There is no "Forgot Password" button and no security verification such as CAPTCHA during the login process.	If the system is upgraded by the management, it is advisable to add a "Forgot Password" feature and a CAPTCHA verification link. Adding these two features will enhance the security of the system..

Home Page of the Premium Quality Information (PQI) System

This is the initial screen of the system after logging in. No data is displayed initially; data will appear only after it has been inputted into the system.



Figure 5. First Finding

After entering the PO Number, it will be displayed in the system as shown in the image below:

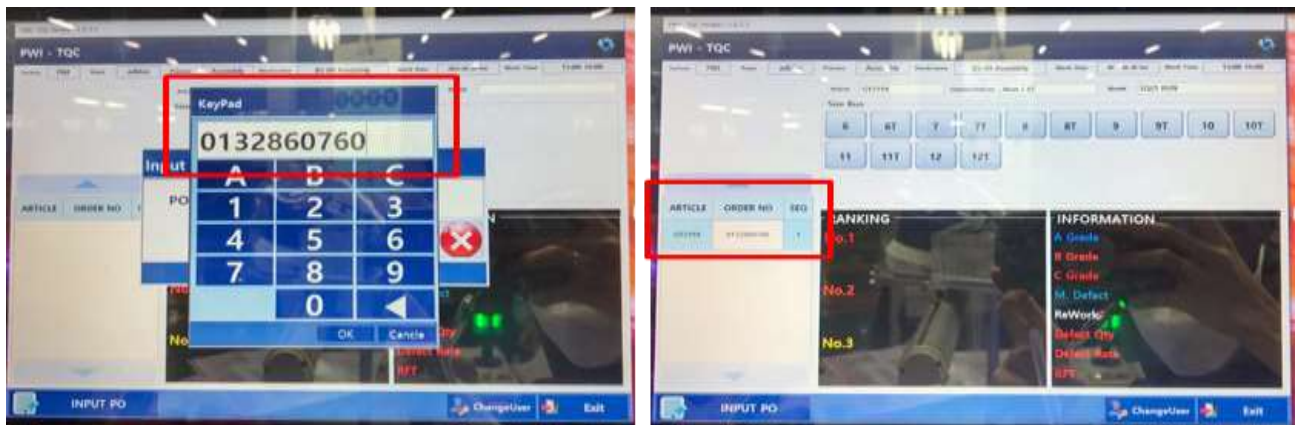


Figure 6: Audit Finding 2

Table 2. Audit Finding 2

Audit Finding	Weakness	Recommendation
Finding 2	The initial home page display is somewhat confusing due to the text colors used for the rankings and information, making it difficult to distinguish between A, B, and C grade shoes.	For the rankings and information display, it is recommended to change the text colors to improve clarity. Typically, A grade is represented by green, while B and C grades are represented by red. Although this change does not affect the system's performance, it will help users quickly identify the different data grades through the color-coded text on the system display.

Input Defect Menu Display

Before entering a defect, you must select the shoe size being checked. Click on the size displayed on the system screen, then proceed to input whether the defect is on the left or right shoe. The left and right shoes are indicated as "Right" and "Left" on the screen. After selecting one, you can then input the defect by clicking on the corresponding number on the shoe diagram displayed on the system screen. Each number has a specific function, describing the type of defect when clicked.



Figure 7: Audit Finding 3

Table 3. Audit Finding 3

Audit Finding	Advantages	Weaknesses	Recommendation
Finding 3	The size display is quite good as it is easy to understand and clearly visible, ensuring that users do not have difficulty when inputting the size.	Entering defects for the left and right shoes slows down user performance slightly because the interface uses English terms instead of Indonesian.	The researcher recommends that the left and right shoe displays be changed to images to clearly differentiate between the two. Alternatively, replacing the English terms "Right" and "Left" with the Indonesian terms "kanan" and "kiri" would speed up the defect input process.

Defect Input Results Display

After inputting defects, the system displays the defects entered in the previous process, as shown in Figure 4.4. In addition to the defect results, the system also displays the shoe grade and Right First Time (RFT).

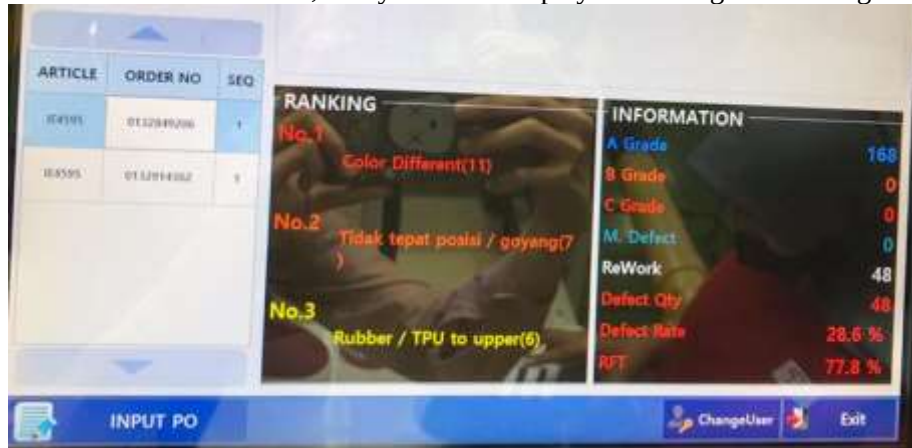


Figure 8: Audit Finding 4

Table 4. Audit Finding 4

Audit Finding	Advantages	Recommendation
Finding 4	The ranking display is very good because it includes the top 3 most frequently input defects, allowing management to quickly identify common issues when shoes with the specific PO Number are being processed.	The researcher recommends separating the shoe grade and Right First Time (RFT) from the information display. A new display with larger font sizes should be created so that users can quickly and easily distinguish the Right First Time (RFT) percentage when management inquires about the daily RFT results.

Audit Report Results

The audit report consists of the inspection and recommendations from the researcher regarding the management's control weaknesses in the Premium Quality Information (PQI) system at Factory 5. The steps to be followed in reporting the audit results are as follows: 1) The report concept is based on the inspections conducted by the researcher; 2) The draft report of the audit findings is presented to the users of the Premium Quality Information (PQI) system at Factory 5; 3) After the review, the draft report of the audit findings is submitted to the relevant management, specifically the IT department of PT. Parkland World Indonesia, and is included in this research thesis.

Steps in Implementing Follow-Up Inspections of Audit Results: 1) The researcher must monitor and evaluate the results of the observations; 2) Any findings from the inspection that have not been addressed must be discussed and documented.

With the follow-up audit, management can make improvements based on the researcher's recommendations.

KESIMPULAN

Audit Procedure Implementation: The audit of the Premium Quality Information (PQI) system was carried out by the researcher, encompassing several stages: preliminary inspection, follow-up inspection, result analysis, discussion of findings, recommendation proposals, and suggested system procedures. 1) Users of the PQI system at Factory 5, PT. Parkland World Indonesia, frequently encounter difficulties due to data entry delays. This issue often leads them to prefer using manual paper reports; 2) The study evaluated the PQI system at Factory 5, focusing on input display assessment, the process flow from login to output generation, and

identifying areas where users face difficulties. Recommendations were made to improve user experience and ensure the system operates according to user expectations; 3) The researcher's observations and questionnaire findings were presented to management for review to determine the feasibility of the suggested improvements to the PQI system at Factory 5. Based on the audit findings of the PQI system at Factory 5, the following conclusions can be drawn: The findings can serve as a basis for management at PT. Parkland World Indonesia to evaluate the PQI system at Factory 5, ensuring it remains beneficial for the company's progress. The findings can serve as a reference for future research on system audits, particularly in the field of information systems.

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