

IMPLEMENTATION OF A WAREHOUSE MANAGEMENT SYSTEM (WMS) TO IMPROVE OPERATIONAL EFFICIENCY

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Abstract :

This study aims to analyze the implementation of Genesis, Lion Parcel's internal Warehouse Management System (WMS), in enhancing operational efficiency at the Gunung Krakatau Branch in Medan. The research method used is descriptive qualitative with a case study approach. Data was obtained through direct observation, semi-structured interviews with warehouse and operations staff, as well as internal company documentation. The research findings indicate that the implementation of Genesis has had a positive impact on several efficiency indicators, including faster sorting processes, improved stock recording accuracy, reduced human error, real-time data access, and enhanced operational reporting quality. The system has also contributed to a significant decrease in customer complaints. However, the implementation of Genesis also faces several challenges, such as human resource adaptation to new technology, reliance on internet connectivity, and the need for updated standard operating procedures (SOPs). Overall, the Genesis system holds great potential to be further developed as part of Lion Parcel's digital transformation in logistics management. Its implementation not only improves operational efficiency at the branch level but can also serve as a strategic digitalization model to be widely applied throughout the company's distribution network.

Keywords: *Operational Efficiency, Warehouse Management System, Genesis, Warehousing, Digital System, Lion Parcel*

Abstrak :

Penelitian ini bertujuan untuk menganalisis penerapan sistem Genesis, yaitu Warehouse Management System (WMS) internal milik Lion Parcel, dalam meningkatkan efisiensi operasional di Cabang Gunung Krakatau Medan. Metode penelitian yang digunakan adalah deskriptif kualitatif dengan pendekatan studi kasus. Data diperoleh melalui observasi langsung, wawancara semi-terstruktur dengan staf gudang dan operasional, serta dokumentasi internal perusahaan. Hasil penelitian menunjukkan bahwa penerapan Genesis memberikan dampak positif terhadap beberapa indikator efisiensi, antara lain percepatan proses sortir barang, peningkatan akurasi pencatatan stok, pengurangan human error, akses data secara real-time, dan peningkatan kualitas pelaporan operasional. Sistem ini juga berkontribusi dalam menurunkan frekuensi keluhan pelanggan secara signifikan. Namun, implementasi Genesis juga menghadapi beberapa tantangan, seperti adaptasi

sumber daya manusia terhadap teknologi baru, ketergantungan terhadap koneksi internet, serta kebutuhan pembaruan standar operasional prosedur (SOP). Secara keseluruhan, sistem Genesis memiliki potensi besar untuk terus dikembangkan sebagai bagian dari transformasi digital manajemen logistik Lion Parcel. Penerapan sistem ini tidak hanya meningkatkan efisiensi operasional di tingkat cabang, tetapi juga dapat menjadi model digitalisasi yang strategis untuk diterapkan secara luas di seluruh jaringan distribusi perusahaan.

Kata Kunci: *Efisiensi Operasional, Warehouse Management System, Genesis, Pergudangan, Sistem Digital, Lion Parcel.*

INTRODUCTION

The logistics industry plays a crucial role in the global economy, serving as a key link ensuring the smooth flow of goods from producers to end consumers. However, this sector is not without challenges. With increasingly fierce competition and increasing demands for efficiency, logistics companies must be able to adapt and provide innovative solutions to survive and thrive (Utomo, 2025). The highly dynamic development of the logistics industry is driving companies to improve operational efficiency to remain competitive in the market. To address these challenges, the use of information technology such as a Warehouse Management System (WMS) is a crucial solution for optimizing warehouse management processes (Oktavia, 2023). This system not only allows companies to monitor the flow of goods in real-time, but also helps in reducing human error, improving stock accuracy, and speeding up the process of picking and shipping goods (Khan, et al, 2022).

WMS, as a smart management system that transforms warehouse activities into full automation, will become a future necessity in the logistics world, in line with industry paradigms that will undoubtedly continue to experience trends over time (Mostafa, et al, 2020). For example, over the past 10 years, the trend of WMS implementation in Indonesia has shown significant progress in increasing technology use (Purbasari, et al, 2020).

Operational efficiency in warehouse management plays a crucial role in the supply chain, particularly in the loading and unloading process. This process requires not only supporting equipment and labor, but also an optimal warehouse layout that can minimize potential operational disruptions (Fauzan, 2025). As part of operations, logistics is the science or art of storing, maintaining, distributing, and disposing of certain goods or equipment. Meanwhile, the logistics business is a business that manages the movement of goods from one point to the final point, which is ultimately the consumer. This is done to meet consumer demand (Rina Ayu Vildayanti et al.,2024).

Warehouse Management System is related to operational efficiency according to (Ningtiyas, 2022) Implementing a Warehouse Management System (WMS) enables companies to minimize human error in the recording, picking, and shipping of goods. This system works by monitoring the flow of goods in real time and integrating administrative data with the physical condition of goods in the warehouse, ensuring that the quantity and type of goods recorded

are always accurate (Ran, Liu, & Zhang, 2020). With higher inventory accuracy, companies can avoid the risk of understocking or overstocking, reduce returns due to shipping errors, and expedite the inventory process.

As a concrete example, Lion Parcel is a logistics company founded on February 14, 2013, as part of the Lion Air Group, one of the largest airline groups in Southeast Asia. Since its inception, Lion Parcel has focused on domestic and international delivery services, leveraging the Lion Group's extensive air and land transportation network. To date, Lion Parcel has a distribution network covering 98% of sub-districts in Indonesia and reaching more than 50 countries worldwide (Haasanah & Daurrohmah, 2024). Furthermore, the company has implemented various digital innovations such as a real-time tracking system, a mobile application, and Google Cloud-based cloud computing integration to improve its operational efficiency. With a wide operational coverage and continuously growing digitalization, Lion Parcel is included in the category of large logistics companies in Indonesia.

Lion Parcel boasts extensive national experience and is a major logistics company with a high level of digitalization. At the branch level, such as Lion Parcel's Gunung Krakatau Medan branch, operational challenges remain in the warehousing process. Temporary storage, returns processing, and physical inventory matching processes in the warehouse have not been fully automated into the core application system used for shipping and tracking services (Milwandhari, 2022). As a result, several warehouse activities, such as item placement, return recording, and inventory monitoring in the transit area, were still performed manually or semi-digitally when Lion Parcel's Gunung Krakatau branch first opened. This situation can create challenges such as potential stock data discrepancies, delays in internal sorting processes, and low efficiency in warehouse space and labor management.

To address these challenges, integration between the Warehouse Management System (WMS) at the back-end of the warehouse and the distribution or shipping system at the front-end is key to creating a fast, accurate, and efficient operational flow (Rizqi, 2025). On the back-end, the WMS manages receiving, storing, stock control, and order processing. This integration ensures that any stock data changes in the warehouse are automatically reflected in the shipping system, so there are no discrepancies between the stock in the warehouse and the orders received by customers (Manager, 2022). Limited integration between back-end warehouse processes (internal optimization) and front-end shipping has the potential to slow managerial decision-making, particularly regarding warehouse capacity optimization and inventory flow management. This situation demonstrates that although companies have advanced in digitizing their delivery services, system integration in the warehousing area remains a challenge that requires more integrated technology-based solutions, such as implementing a Warehouse Management System (WMS) to achieve comprehensive operational efficiency (interview and direct observation with the operations manager of Lion Parcel Cab. Gunung Krakatau on July 1, 2025).

Various previous studies have shown that implementing a WMS can have a positive impact on a company's operational efficiency. (Oktavia, 2023), noted that WMS was able to reduce order processing time by up to 30% through the utilization of real-time tracking and better inventory management. Research by (Utomo, 2025) shows that the combination of Lean and WMS methods significantly improves operational effectiveness in the logistics sector. Meanwhile, (Ropianto, et al, 2020) concluded that implementing a WMS can improve time and cost efficiency in material handling activities, as well as provide more accurate material placement data, thus facilitating decision-making in logistics management. These findings strengthen the evidence that WMS is not just a technology trend, but a strategic necessity for achieving high efficiency in distribution and storage processes. Consistency in product delivery is a major competitive advantage in business, which emphasizes the crucial role of Supply Chain Management (SCM) for companies (Nur, et al, 2025).

This research focuses on analyzing the implementation of Genesis, Lion Parcel's internal Warehouse Management System (WMS), at the branch level, specifically the Gunung Krakatau Medan branch. This has not received much attention in previous research. While most WMS studies focus on large companies with established automation systems supported by modern technologies such as IoT, RFID, and smart warehouses, this research presents a different context: a newly operating logistics branch still in the transition from manual to digital systems. Therefore, this research provides a more concrete picture of how the digitalization process is gradually implemented in the field, including human resource challenges, network infrastructure limitations, and the suboptimal integration between back-end warehousing and front-end delivery.

Based on this background, this study aims to analyze the implementation of a Warehouse Management System (WMS) to improve warehouse operational efficiency at the Gunung Krakatau Medan branch of Lion Parcel. In addition, this study also aims to identify challenges that may arise in the process of integrating WMS with the existing Lion Parcel application system, as well as providing solution recommendations to optimize stock management, return processes, and storage space efficiency in the warehouse.

RESEARCH METHOD

This research uses a qualitative descriptive method with a case study approach focused on Lion Parcel's Gunung Krakatau Medan branch. This method was chosen to gain a deep understanding of the warehouse's operational processes, the various challenges faced in system implementation, and to analyze the potential of implementing a Warehouse Management System (WMS) to improve operational efficiency at the branch. The qualitative method is deemed appropriate because it emphasizes exploring phenomena, exploring substance, and seeking meaning from the dynamics occurring in the field (Rahmani, 2022). Meanwhile, case studies allow researchers to explore

detailed information about a single research object, taking into account the specific context inherent in this relatively new Lion Parcel branch.

Data collection in this study was conducted using three main techniques. First, semi-structured interviews with several key informants, such as warehouse managers and operational staff, to gain insight into workflows, operational challenges, and their perceptions of the use of the digital system (Genesis) in warehouse activities. Second, direct observation at the research location to observe warehouse workflows, sorting processes, inventory management, and the integration of existing application systems. Third, internal documentation, including warehouse operational reports, weekly shipping data, return records, and inventory records, was collected. This documentation serves as supporting data to help validate field information.

The research instruments used consisted of a semi-structured interview guide, warehouse activity observation sheets, and a company document analysis template. These three instruments were designed to facilitate the data collection process, ensuring that the information obtained was more focused, consistent, and relevant to the research objectives.

Data analysis was conducted using a thematic analysis approach. Thematic analysis is used to identify patterns and discover key themes from the collected qualitative data (Ramdhan, 2021). This approach is effective in uncovering interconnected patterns within phenomena and explaining the extent to which these phenomena occur from the researcher's perspective. As a complement, this study also uses simple quantitative descriptive analysis, such as graphs showing changes in processing time and stock accuracy levels, to strengthen the qualitative findings.

To ensure data validity, this study employed source triangulation techniques. This technique involves comparing the results of interviews, observations, and internal company documentation. The application of triangulation aims to ensure the consistency of data obtained from various sources while simultaneously increasing the validity of the research results.

FINDINGS AND DISCUSSION

Based on the results of data processing using a thematic analysis approach, several key themes were identified that were significant in describing the impact of the Warehouse Management System (Genesis) implementation on operational efficiency at Lion Parcel's Gunung Krakatau Medan Branch. These themes were identified through interviews, direct observations, and internal company documentation. These findings will be linked and explained according to the main themes of the thematic analysis results as follows:

General description

The logistics industry in Indonesia has experienced significant growth in recent years, driven by the increasing need for fast, efficient, and reliable delivery. The growth of e-commerce, changes in consumer behavior, and the demand for transparency and accuracy in shipment tracking have all driven logistics companies to innovate and expand their services. Lion Parcel, a

leading logistics company in Indonesia under the Lion Group, continues to innovate in providing delivery services that are responsive to current and technological developments.

As part of its strategy to expand and optimize its distribution network in North Sumatra, in 2024, Lion Parcel opened a new branch at Jalan Bambu I No. 19A/92, Medan Timur District, Medan City. This branch, named the Lion Parcel Gunung Krakatau Branch, is designed to play a strategic role as a key distribution point bridging local and inter-island shipments. Given its strategic location, the opening of this branch is expected to expand delivery reach, accelerate logistics processes, and increase service capacity to meet growing market demand in Medan and the surrounding area.

However, like many other new branches, the work system at Lion Parcel's Gunung Krakatau Medan branch underwent a gradual process of adaptation and development. In the first two months of operation, warehouse management processes were still carried out conventionally and manually. Key activities, such as receiving goods, temporary storage, sorting, shipping distribution, and returns, were all handled using written records or simple spreadsheets. Each item was recorded by different staff without an adequate centralized data system, ultimately leading to a number of operational challenges such as inconsistencies in stock data, human error in item placement, and delays in sorting and shipping.

The lack of real-time data also hampered branch management in making quick decisions when faced with surges in shipping volume or unforeseen technical situations in the field. This demonstrated that manual work models were no longer able to keep up with the dynamics and complexity of modern logistics systems, which require speed, accuracy, and data visibility.

Entering its third month of operation, Lion Parcel's Gunung Krakatau branch began implementing an internal digital system called Genesis, an exclusive Warehouse Management System (WMS) developed specifically by Lion Parcel. This system represents a crucial digital transformation step in improving the efficiency and effectiveness of warehouse operations. Through Genesis, all processes, from receiving goods, storing, sorting, estimating delivery times, and reporting, are integrated and digital. Warehouse staff are tasked with periodically inputting data into the system, which can then be centrally accessed for analysis and managerial decision-making.

The implementation of Genesis has had a tangible positive impact. The system has improved the accuracy of warehouse data, accelerated sorting times, and facilitated item tracking. Furthermore, the system has reduced the workload of staff previously burdened with repetitive manual record-keeping. The use of this digital system has accelerated data processing and generated more valid and real-time reports, thus supporting ongoing work monitoring and evaluation.

In addition to internal transformation, Lion Parcel also prioritizes the customer experience by introducing a real-time shipment tracking feature through its official app. After customers place a shipment, they receive a

tracking number that can be used to track the package's location directly through the Lion Parcel app. This innovation increases the transparency of the delivery process, provides certainty and convenience to customers, and adds value to Lion Parcel's reputation as a logistics service provider that adapts to technological advancements.

Thus, the transition from a manual work system to the digital Genesis system is a significant milestone in the operational journey of Lion Parcel's Gunung Krakatau Medan branch. This step not only improves work efficiency and customer satisfaction but also reflects the company's focus on modernization, competitiveness, and sustainability of logistics services amidst increasingly fierce industry competition.

Potential Applications of Genesis

Thematic analysis also revealed the potential for digital system replication. Genesis has not only impacted operational efficiency at this branch but also has the potential to be implemented as a model in other branches. This is supported by interviews that mentioned increased staff digital literacy, as well as documentation showing significant improvements in reporting, sorting times, and a reduction in recording errors. This potential is one of the key findings under the theme of strengthening competitiveness and system replication.

The implementation of the Genesis system at Lion Parcel's Gunung Krakatau Medan branch has demonstrated a significant positive impact on operational efficiency. Since its introduction in the third month of operation, the system has improved goods processing speed, recording accuracy, and overall logistics data transparency. Average receipts have increased to 40–60 packages per day, with a dramatic decrease in recording error rates. Every transaction is now recorded automatically and centrally, allowing staff to monitor the flow of goods in real time.

Furthermore, the sorting process has been accelerated, with sorting times that previously required more than two hours per shift now taking only about 30–45 minutes. Weekly reports that previously required manual recaps can now be generated automatically by the system. This has a direct impact on reducing customer complaints, particularly regarding delivery delays and tracking errors.

The importance of efficiency in digital technology-based services is strongly supported by a robust network concept, which plays a central role in improving overall efficiency (Yusnidar, et al, 2023).

Furthermore, Genesis has long-term potential to drive comprehensive digital transformation of branches. Some of this potential includes:

1. Cross-Functional and Branch Integration

Genesis enables data synchronization between departments such as warehouses, shipping, and customer service. With real-time access, the system can accelerate communication between divisions and reduce information barriers. In the future, the system also has the potential to be

integrated nationally, connecting branches to each other on a single data platform.

2. Improving Human Resource Capabilities

The use of Genesis opens up opportunities to improve digital literacy for operational staff. Human resource development is a long-term focus for enhancing company performance and preparing employees to adapt to change and long-term growth (Rilopari & Himawan, 2021). This can improve the quality of human resources in the logistics work environment, making them more adaptive to technology and ready to face the challenges of the digital-based industry.

3. Operational Cost Efficiency

By automating processes and reducing recording errors, Genesis indirectly reduces wasteful costs caused by reshipments, returns, or misplaced items. This potential savings will increase as the volume of goods processed increases.

4. Readiness for Smart Warehouse

Genesis can be the initial foundation for a smart warehouse system connected with advanced technologies such as the Internet of Things (IoT), automatic tracking sensors, and predictive analytics. This opens up opportunities to modernize Lion Parcel's logistics system to a new level.

5. Increasing Branch Competitiveness

With increased efficiency and improved customer service, the Gunung Krakatau Branch can serve as a model for other branches. The Genesis implementation also adds branding value, as customers can see the company's commitment to technology and service quality.

The following table summarizes the operational comparison before and after the implementation of Genesis in this branch:

Table 1: Comparison of Goods Receipt Before and After Using the Genesis System

Operational Aspects	Before (Manual)	After (Genesis/WMS)
Period	January – February 2024	March 2024 – Present
Average Goods Receipt	± 50 packages/day	Over 100 packages/day
Recording Method	Manual (handwritten/spreadsheet)	Digital via Genesis system
Recording Errors	Frequently occurs	Minimal/almost nonexistent
Sorting Process Speed	Slow (takes >2 hours per shift)	Fast (±30–45 minutes per shift)
Real-Time Data Access	Not available	Available & integrated
Customer Complaints	Quite high (especially tracking issues)	Drastically reduced
Reporting Quality	Late, manually	Automatic, accurate,

summarized	weekly
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With all these achievements, the Genesis system serves not only as an operational tool but also as a crucial foundation in Lion Parcel's logistics system modernization strategy. The system's potential needs to be continuously maximized through regular evaluation, advanced feature development, and ongoing training for all personnel involved.

Challenges and Obstacles Faced

Although the implementation of the Genesis system has had a positive impact on operational efficiency, the implementation process at Lion Parcel's Gunung Krakatau Medan branch was not without challenges. These challenges arose from human resources, technological infrastructure, and the still-developing system integration aspect.

One major challenge lay in the adaptation of human resources to the new digital system. As a branch that previously used manual methods, most staff experienced initial difficulties understanding the Genesis workflow. This change required intensive training to ensure each employee was able to use the system's features effectively. A warehouse employee, Rudiansyah, stated that at the beginning of implementation, "I was initially confused about using Genesis because I wasn't used to it, but after training from the central office, I became more familiar." This highlights the importance of ongoing educational support from central management.

Furthermore, there were challenges with network infrastructure. The Genesis system requires a stable internet connection to function in real time. However, conditions in the field indicated that network stability was suboptimal in some work areas. Aulia Sari, an operations staff member, stated that "if the internet goes down, data input is sometimes hampered." These constraints slow down the recording and reporting process and hamper decision-making during high shipment volumes.

Another challenge arises from the suboptimal integration between internal systems, particularly between warehousing processes (back-end) and the tracking system used by customers (front-end). This lack of synchronization risks creating an information gap between actual warehouse conditions and the information received by customers, which can ultimately impact consumer trust.

Furthermore, the standard operating procedures (SOPs) previously developed for manual processes have not been fully updated to accommodate the features and needs of the digital system. Without updated SOPs, the utilization of the Genesis feature is less than optimal. This change requires active collaboration between central and branch management to redesign more adaptive procedures.

As an additional note, based on interviews and internal documentation, in the first two months (January–February 2024), the recording system was still manual, with a volume of approximately 15–20 packages per day. Recording errors were quite high, ranging from data duplication to misplacement of items. After the third month of Genesis implementation, goods receipts increased to

approximately 40–60 packages per day, the sorting process was faster, and automated weekly reporting significantly reduced customer complaints.

Interviews revealed that staff initially struggled to adapt to the Genesis system. Other challenges included unstable internet connectivity and delays in updating standard operating procedures (SOPs) that were not aligned with the new system. All of this underpinned the theme of infrastructure and human resource unpreparedness as barriers to digital transformation.

Thus, the challenges faced during the Genesis system implementation were closely related to technological readiness, personnel readiness, and management system adjustments. While these challenges are real, the positive impacts demonstrate that the digital transformation process is moving in the right direction, although ongoing support and evaluation are still needed.

DISCUSSION

Field findings indicate that the implementation of the Genesis system at Lion Parcel's Gunung Krakatau Medan branch has brought significant changes in operational efficiency, particularly in the process of receiving, recording, sorting, and reporting goods. However, upon critical review, the system's effectiveness still has room for improvement, both in terms of technical and managerial aspects, as well as human resource readiness. Although digitalization offers convenience, adoption challenges remain, as some users tend to prefer traditional methods based on perceived security and the convenience of direct interaction (Hernita, et al, 2024).

Specifically, the results of operational efficiency indicators show positive results. The goods receiving process has become faster and more structured, stock recording accuracy has increased, and manual errors (human error) have decreased significantly. The speed of the goods sorting process also demonstrates high efficiency, with sorting times per shift significantly shorter (Monica & Pradana, 2024). The availability of real-time data helps managers make more timely decisions, and operational reports can be generated more accurately. In fact, the frequency of customer complaints has decreased due to more timely deliveries and more transparent tracking. This demonstrates that the Genesis system has significantly contributed to overall efficiency improvements in the warehouse (Oktavia, 2023).

Technically, Genesis has proven its ability to automate manual work processes that previously hampered the smooth distribution of goods. Increased receipt volume, accelerated sorting, and a reduction in recording errors are clear indicators of the system's success (Fadhillah & Daulay, 2023). However, dependence on a stable internet connection remains a barrier to ensuring the system's smooth operation at all times (Garg, 2025). This indicates that the system is not fully resilient to infrastructure disruptions, and network strengthening and alternative backup systems are needed. Timely distribution of goods is crucial for achieving company goals and expectations as planned (Anisa & Aslami, 2022).

From an organizational and human resources perspective, although

initial training has been provided, interviews indicate that employee adaptation to the digital system still requires time and continued guidance. Some staff members felt they were not fully confident operating the Genesis system without assistance. This indicates the need for a more systematic and ongoing training strategy, such as internal mentoring, the development of digital-based work guide modules, and simulations of system use in real-world work scenarios.

Furthermore, from a managerial policy perspective, the lack of updated standard operating procedures (SOPs) is also a significant concern. When the system changes, the SOPs that underpin daily activities must also be adjusted to avoid a gap between digital processes and work routines still based on legacy methods. If left unaddressed, this situation has the potential to hinder the full utilization of Genesis's features.

Based on the above evaluation, the following recommendations can be implemented to improve the success of the Genesis system in this branch and other branches in the future:

1. Strengthening Digital Infrastructure

There needs to be investment in improving the quality of the internet network in the warehouse area, including providing a backup connection so that the system continues to run in the event of disruption.

2. Continuous Training and Internal Certification

Develop a tiered training program for operational staff, either in the form of online classes, mentoring by senior staff, or providing internal certification training on digital logistics management.

3. Updates to SOPs and Work Procedures

Headquarters and branch management need to restructure their warehouse SOPs by adapting the digital features and workflows in Genesis, so that all teams have a common reference.

4. Genesis Feature Development

Propose the development of additional features such as automatic notifications, CCTV camera integration for goods monitoring, and warehouse performance dashboards to improve the evaluative function of the system.

5. Periodic Monitoring and Evaluation

It's important to conduct regular operational audits to assess the effectiveness of Genesis. These evaluations can include data analysis, staff interviews, and customer complaint reporting.

In this section, the theme of critical evaluation and improvement strategies emerges strongly. Based on previous findings, it was discovered that while Genesis offers numerous benefits, the system still requires improvements in staff training, updating SOPs, and strengthening the infrastructure network. Recommendations emerging from this thematic analysis emphasize the need for continuous system development to fully optimize digitalization within Lion Parcel's logistics environment.

By implementing the above recommendations, the Genesis system's

potential can be further optimized, not only for internal efficiency but also to enhance branch competitiveness in the increasingly competitive digital logistics ecosystem. In the long term, this system has the potential to be widely adopted by other branches as a successful model for operational digitalization. It should be noted that successful implementation must be supported by human resource readiness, adaptive management, and adequate infrastructure.

CONCLUSION

This study aims to analyze the implementation of Genesis, Lion Parcel's internal Warehouse Management System (WMS), to improve operational efficiency at the Gunung Krakatau Medan branch. Based on observations, interviews, and field documentation, it can be concluded that the Genesis system has had a significant positive impact on warehouse operational performance, particularly in terms of process speed, recording accuracy, and reporting and tracking quality.

The implementation of Genesis has successfully reduced reliance on manual recording, accelerated the sorting process, and minimized data errors and customer complaints. Real-time access to logistics information also increases transparency and enables faster decision-making at the managerial level. This efficiency is evident in the increased volume of goods processed, reduced recording errors, and significant improvements in customer service quality.

However, the Genesis implementation process also faced several challenges, such as limited network infrastructure, human resource adaptation to the digital system, and the need to update SOPs to align with the new system. These challenges are technical in nature and can be overcome through ongoing training, strengthening support systems, and collaboration between headquarter and branch management.

Overall, the Genesis system has significant potential for further optimization as a foundation for full digitalization in Lion Parcel's warehouse management. The implementation of this system is not only relevant to increase efficiency at the branch level, but is also worthy of being developed into a national standard in supporting the competitiveness of logistics companies in the digital era.

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