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Analysis of the Secondhand Watch Business Process Using Business Process Mapping and a Priority Matrix

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General Background: The global secondhand luxury watch market has experienced rapid growth, becoming a crucial segment of the circular economy due to sustainability concerns and investment potential. **Specific Background:** Despite this potential, many Small and Medium-sized Enterprises (SMEs) in developing countries, such as Indonesia, struggle with informal operational practices, including inconsistent grading, unsystematic sorting, and fragmented inventory systems. **Knowledge Gap:** Existing studies on business process efficiency have rarely focused on SMEs in the pre-owned luxury watch sector, leaving a gap in structured frameworks tailored to this industry. **Aims:** This study aimed to design and validate a systematic operational model to enhance efficiency and decision-making in a case study SME, Watchout.id. **Results:** Using Business Process Mapping, a new workflow was created and complemented by two objective rubrics—an Effort Assessment and an Impact Assessment—integrated into a novel 3x3 Zoned Priority Matrix. This framework was further supported by a prototype inventory dashboard. Validation with the business owner confirmed the framework’s applicability and relevance. **Novelty:** The research introduces an enhanced decision-making tool beyond the traditional 2x2 matrix, offering more nuanced categorization and resource allocation strategies. **Implications:** The proposed framework provides a replicable model for SMEs in the secondhand luxury market, enabling more efficient, scalable, and data-driven operations.

Highlights:

- Structured framework improves SME efficiency.
- 3x3 Priority Matrix enables nuanced decisions.
- Integrated dashboard enhances inventory visibility.

Keywords: Business Process Mapping, Priority Matrix, Secondhand Watches, Operational Efficiency, SMEs

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Introduction

The global market for pre-owned luxury watches has shown remarkable growth, becoming a significant segment within the broader circular economy [1]. This trend is driven by multiple factors, including increasing consumer awareness of sustainability [2] and the products' significant investment value, which in some cases has outperformed traditional financial indexes [3][4]. This growth presents a substantial opportunity for Small and Medium-sized Enterprises (SMEs) in developing markets like Indonesia [5].

However, many SMEs in this sector, such as the case study subject "Watchout.id," often operate with informal and unstructured processes. This informality leads to several critical business challenges that hinder efficiency and scalability. The primary issues identified at Watchout.id were a lack of documented standards for product grading, an ad-hoc sorting process based on intuition rather than data, and a disconnected inventory system that resulted in poor stock visibility and potential data loss. These inefficiencies directly impact the business's ability to grow and maximize profitability.

Therefore, this research aimed to address the following question: How can a structured business process and a systematic priority-setting framework be designed to improve operational efficiency at a secondhand watch SME? To answer this, a new operational framework was designed using a combination of Business Process Mapping (BPM) to structure the workflow [6] and a custom-developed Priority Matrix to guide decision-making [7]. This paper presents the design and validation of this framework.

Method

This study employed a qualitative, single-case study methodology to conduct an in-depth analysis of the operational processes at Watchout.id [8][9]. Data was collected through a triangulation of methods: semi-structured interviews with the business owner, direct observation of the workflow, and document analysis [10]. Thematic analysis was used to interpret the qualitative data from the interviews, following the phases outlined by Braun & Clarke [11].

The core of the methodology involved two main phases:

a) Analysis and Diagnosis: Business Process Mapping (BPM) was used to visualize the existing "As-Is" workflow. This mapping exercise was crucial for identifying specific bottlenecks, redundancies, and points of failure in the operational process, supporting the premise that process visualization is a critical diagnostic step [6].

b) Design and Development: Based on the diagnosis, a new "To-Be" framework was designed. This involved developing two novel assessment tools. The design of these rubrics was informed by a synthesis of data from owner interviews and a review of established industry grading standards [12][13][14][15].

- Effort Assessment Rubric (X-Axis): A comprehensive rubric was created to objectively assess the Level of Service Need. This rubric evaluates a watch based on six sub-components (Machine Accuracy, Machine Originality, Dial & Hands, Crystal, Case & Bezel, Bracelet/Strap) to produce a final "Effort Score" from 1 (very low) to 5 (very high).
- Impact Assessment Rubric (Y-Axis): A multi-factor rubric was designed to quantify the Sale Value/Rarity The final "Impact Score" (ranging from 3-9) is the sum of scores from three factors: Brand Tier, Model Rarity, and Unique Features/Materials.

These two scores were then integrated into a custom-developed "Zoned Priority Matrix". Unlike a standard 2x2 matrix, this 3x3 grid provides more nuanced strategic direction by defining "Low," "Medium," and "High" zones for both axes, resulting in more precise decision-making categories. The visual representation of this matrix is presented in Table 1. The entire proposed system was then presented to the business owner for feedback and validation.

	Low Effort (Score 1-2)	Medium Effort (Score 3)	High Effort (Score 4-5)
High Impact (Score 8-9)	Main Stars: Highest priority. Escalate for immediate sale, give special marketing spotlight.	Routine Work: Process efficiently after main priorities. These are stable, core products.	Major Projects (Investment): High-value assets that need repair. Allocate technical resources as a priority.

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Medium Impact (Score 6-7)	Quick Wins: Process quickly. This is the backbone of daily sales.	Postpone: Conduct a quick cost-benefit analysis. Proceed only if resources are readily available.	Strict Consideration: High risk, medium reward. Proceed only for specific strategic reasons.
Low Impact (Score 3-5)	Fill-in Tasks: Work on these when there is spare time. Suitable for quick sales with low margins.	Ignore Temporarily: Do not work on these. Focus on more valuable quadrants.	Avoid / Cannibalize: Do not invest time/funds. Sell "as is" or cannibalize for spare parts.

Table 1. Zoned Strategic Decision Matrix

Results and Discussion

The research successfully produced a comprehensive, validated operational improvement framework. The results are presented through the three core components of the designed solution, followed by a discussion of their implications.

1. A Structured, Objective Assessment System

The primary result is the creation of a standardized assessment system that replaces subjective intuition with objective, data-driven rubrics. The Effort Assessment Rubric (X-Axis) allows a technician to systematically evaluate a watch's physical condition across six key areas (machine, dial, crystal, etc.) and convert it into a single "Effort Score". The Impact Assessment Rubric (Y-Axis) enables a systematic evaluation of an item's market value based on brand tier, model rarity, and unique features.

This directly addresses the core problem of having no written standards, as confirmed by the business owner during the validation session. The owner stated the rubrics were "clear enough and representative of the watch conditions I usually encounter" and would serve as a clear guide for all staff.

2. The Zoned Priority Matrix

A key innovation of this research is the development of a 3x3 "Zoned Priority Matrix," an advancement on the standard 2x2 model. This approach was chosen for its practical applicability within an SME context over more complex multi-criteria decision-making methods like the Analytic Hierarchy Process (AHP) [16] or frameworks focused on service evaluation like Importance-Performance Analysis (IPA) [17]. By defining "Low," "Medium," and "High" zones for both the Effort and Impact axes, the matrix provides a more granular and flexible decision-making tool. This allows for more precise strategies, such as distinguishing between a "Main Stars" (High Impact, Low Effort) and a "Major Projects (Investment)" (High Impact, High Effort), which a simple 2x2 matrix [7] would group together. The owner validated this approach as "very objective and could be a new business process worth trying".

3. The Integrated "To-Be" Process and Dashboard

The culmination of this research is the integration of the newly designed assessment system and priority matrix into a single, coherent workflow. This "To-Be" process map, developed using BPM principles, fundamentally alters the "As-Is" workflow by front-loading all assessment and data entry activities. This change creates a single source of truth from the moment a product enters the inventory and ensures that all subsequent operational decisions are data-driven. The complete, structured flow of this new operational model is presented in Figure 1.

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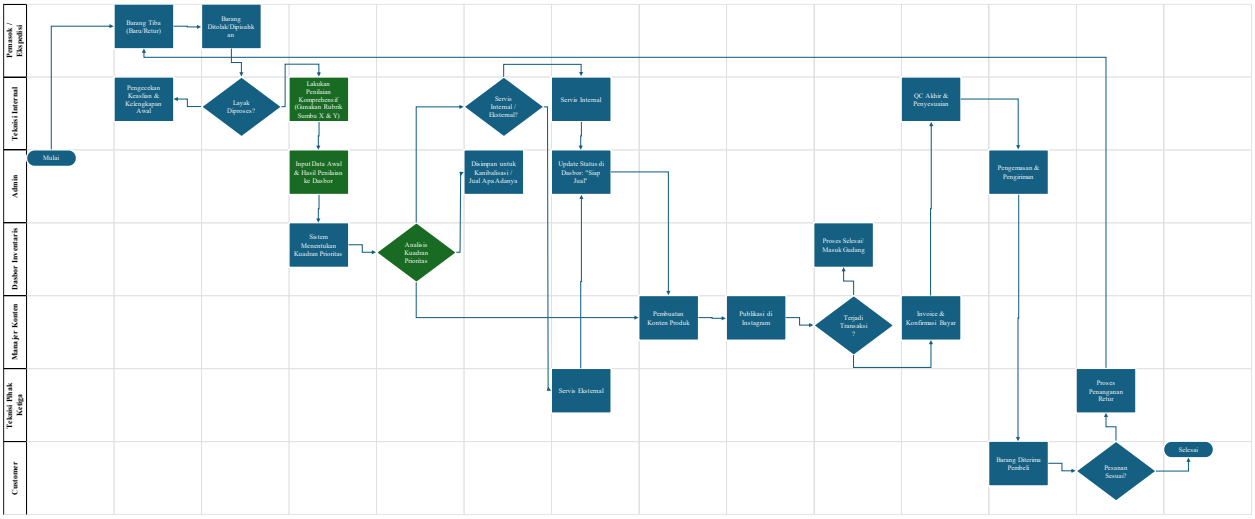

Figure 1. The Proposed "To-Be" Business Process Flowchart

The final result is the integration of these tools into a new "To-Be" process map and a prototype inventory dashboard. The new workflow mandates that assessment and data entry occur at the beginning of the process. This redesign, a direct application of BPM principles [6][18], directly solves the critical issues of poor inventory visibility and inconsistent data management. The owner confirmed that the new dashboard with its status and location tracking would "greatly overcome" the problem of tracking items in for repair.

Overall, this research contributes to the practical application of management theories by demonstrating how BPM and Priority Matrix concepts can be adapted and enhanced to fit the specific needs of an SME in the secondhand luxury market, filling a gap identified in a review of prior literature [19].

Conclusion

This study successfully designed and validated a structured and objective operational framework to address key inefficiencies at Watchout.id. The research concludes that a systematic assessment system, utilizing detailed rubrics to quantify both service effort and market value, can effectively replace subjective, informal evaluation processes within an SME. Furthermore, the development of a "Zoned Priority Matrix" (3x3) provides a more nuanced and strategically flexible tool for decision-making compared to a standard 2x2 matrix, allowing for better resource allocation. The integration of these assessment tools into a redesigned "To-Be" business process, supported by a centralized inventory dashboard, directly solves the critical problems of poor data management and low inventory visibility, creating a foundation for efficient and scalable operations. The entire framework was validated as applicable and realistic by the business owner, providing a practical model for other SMEs in the secondhand luxury market to improve their operational decision-making.

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