

## Implementing Continuous Improvement through Idea Management System: A Systematic Literature Review

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### Abstract

The concept of continuous improvement (CI) is essential for sustaining operational excellence and fostering organizational innovation. The Idea Management System (IMS) is a structured tool that has recently gained popularity. Its purpose is to collect, evaluate, and apply employee-generated ideas inside formal improvement procedures. In this study, 14 peer-reviewed publications published between 2010 and 2024 are systematically analyzed with an emphasis on IMS implementations that enable CI in diverse organizational contexts. The role of IMS is positioned not only as a CI enabler but also as an integral component of organizational knowledge management, facilitating the capture, dissemination, and institutionalization of employee knowledge. By fostering a culture of participation, enhancing the quality of ideas, and encouraging iterative process changes, the results show that both digital and suggestion-based IMS considerably increase CI. However, there are still gaps in integrating cutting-edge technology like Artificial Intelligence (AI) and assessing long-term effects. In order to optimize the strategic value of IMS in continuous improvement programs, this study synthesizes important success criteria and suggests future research topics.

**Keywords:** Continuous Improvement, Kaizen, Idea Management System, Innovation, Knowledge Management.

### 1. Introduction

Continuous Improvement (CI) is a systematic approach that emphasizes gradual, ongoing improvement of products, services, or processes within an organization [1]. As the core of lean manufacturing practices and Kaizen-based management, this concept plays a strategic role in enhancing operational efficiency, employee productivity, and product quality within an organization. However, the implementation of CI is often hindered by various obstacles such as low consistency in employee engagement, weak follow-up on emerging ideas, and insufficient institutional support [2]. As a result, many potential ideas proposed by employees often go unnoticed or ignored because the organization lacks effective formal mechanisms to manage and implement these ideas [3]. Organizational culture and practices play an important role in influencing employee participation and behavior in organizational improvement initiatives [11]. Employees, as one of the organization's key stakeholders, play an active role in contributing innovative ideas, improving process efficiency, and strengthening a culture of continuous improvement [10].

As a solution to this problem, suggestion systems such as *Kaizen Teian* serve as structured tools that enable employees to submit improvement ideas and actively participate in decision-making. These systems enhance communication, motivation, and engagement, while supporting continuous improvement through systematic idea evaluation and implementation. As highlighted in [4], such mechanisms contribute not only to operational efficiency but also to fostering an innovation-oriented organizational culture. It has been described as a formal system that enables the capture of ideas, facilitates collaboration among organizational members, and supports decision-making in the context of continuous improvement [5]. Through

mechanisms of transparency, feedback loops, and clear governance, IMS can strengthen the integration between employee ideas and the organization's overall improvement goals [6], [7]. Moreover, IMS plays a critical role in formalizing employee knowledge and embedding it into operational systems, transforming isolated suggestions into shareable organizational assets [1]. IMS also functions as a key enabler of knowledge management by documenting experiential insights, standardizing improvement pathways, and fostering collective learning across departments [3]. In this way, IMS bridges the gap between idea generation and institutional knowledge retention, aligning continuous improvement with long-term organizational learning.

Although there have been many studies discussing IMS in the context of innovation, lean practices, and suggestion systems, the available literature to date remains fragmented. Some studies focus more on governance and reward systems [6], while others emphasise digitalisation and software implementation [5]. Relatively few explore IMS as a comprehensive system that supports continuous improvement. Additionally, most previous research has relied on single-case study approaches or conceptual models, thereby limiting the potential for generalising research findings across various sectors and organisational contexts [8].

Given the fragmented state of the literature, this study aims to conduct a systematic literature review (SLR) of 14 peer-reviewed scientific journal articles published between 2015 and 2024 that explicitly discuss the implementation of IMS and its impact on continuous improvement. This study employs a structured analytical approach using the PCLMF framework (Preview, Contribution, Limitation, Methodology, Future Research) to synthesise cross-contextual insights and identify the key mechanisms explaining how IMS can effectively support CI initiatives at the organisational level.

The novelty of this research lies in the integrative approach used, namely placing IMS as a driving factor for continuous improvement that encompasses both technological and organisational behavioural dimensions. This perspective has not been thoroughly examined in previous SLR studies. Furthermore, by identifying methodological patterns and exploring under-researched areas such as digital IMS governance and the evaluation of long-term impacts, this study contributes both theoretically and practically to the development of literature in the fields of continuous improvement, idea management, and knowledge management.

### **Problem Formulation**

Although Idea Management Systems (IMS) are increasingly being implemented by various organisations as a structured means of managing and collecting ideas for improvement, the effectiveness of IMS in supporting continuous improvement (CI) is still relatively unexplored and tends to be inconsistent in the available scientific literature. Previous studies have highlighted specific aspects of IMS, such as reward mechanisms [5], governance structures [3], and employee engagement [1]; however, there are still few studies that holistically evaluate the strategic impact of IMS on continuous improvement outcomes across different organisational contexts.

This study aims to fill this gap by applying a systematic literature review (SLR) method to 14 selected scientific articles. Specifically, this study aims to examine the extent to which IMS contributes to CI, particularly in relation to improving the flow of

ideas, employee engagement, and efficiency in the implementation of these ideas. To guide this synthesis, the following two research hypotheses are proposed:

H1: How can the structured implementation of an idea management system (IMS) positively improve the quality and quantity of ideas proposed by employees to support the implementation of continuous improvement?

H2: How can organisations that adopt IMS with a formal governance framework, such as reward and feedback mechanisms, achieve more stable and sustainable continuous improvement results compared to organisations that use informal or unstructured approaches to managing ideas?

## **Research Objectives**

This study has two main objectives, which are specifically formulated as follows:

To examine in depth the mechanism of how the implementation of a structured idea management system (IMS) can encourage an increase in the quality and quantity of employee ideas in supporting various continuous improvement efforts in the organisation.

To evaluate the role of formal governance in the adoption of IMS, particularly through reward mechanisms and feedback, in achieving more consistent and sustainable continuous improvement outcomes compared to organisations that adopt informal or unstructured idea management processes.

## **2. Literature Review**

Previous research has shown that the strategic use of an Idea Management System (IMS) can support the success of continuous improvement (CI) programmes, particularly in companies that apply lean manufacturing principles [1]. This system structurally facilitates the collection of ideas from employees, the identification and visualisation of issues within business processes, and consistent feedback mechanisms, thereby simultaneously strengthening a learning culture at the organisational level. Thus, IMS is not merely viewed as a technical tool but also as a strategic instrument that connects employees' internal insights with managerial decision-making to ensure the sustainability of continuous improvement implementation.

Other studies emphasise the crucial role of IMS as a central component in an organisation's quality management and innovation system [3]. This research shows that an idea management system that is structured and integrated with internal management practices can effectively improve operational performance in a measurable way and strengthen employee engagement. These results clarify that IMS functions as an active driver in the implementation of continuous improvement, especially when the system is integrated with a broader organisational quality framework.

In the context of Industry 4.0 implementation, the application of an employee suggestion system based on lean principles and a coaching approach has been proven to significantly increase the quantity and quality of ideas submitted by employees [2]. Through human-centric design, coaching methods, and the integration of motivational elements, this system encourages active employee participation and generates high-value ideas. This demonstrates that an IMS system designed based on lean principles can be optimised for modern digital industrial environments to strengthen a culture of continuous improvement within the organisation.

Another study on web-based IMS governance indicates that the design of reward systems and transparency in the feedback process are crucial in maintaining employee participation levels and the quality of ideas generated [5]. Furthermore, this study places IMS in the context of open innovation, where the system not only functions as an idea repository but also as a strategic mechanism that drives employee motivation and cultural engagement to actively contribute to continuous improvement.

Empirical findings from a remanufacturing company identify that the effectiveness of idea management systems tends to vary between production units and administrative units [7]. This study confirms that the implementation of an IMS tailored specifically to the characteristics of each department influences the extent to which continuous improvement is successfully implemented. Thus, this research emphasises the need for governance designs and employee engagement models that are specific to the operational context of each organisational unit.

Another conceptual analysis explains that the IMS system, which was initially developed to support gradual (incremental) continuous improvement processes, must now transform to accommodate the need for more radical and disruptive innovation [9]. This study recommends that future IMS adopt a dual-function approach capable of managing incremental innovation processes while also providing space for transformational innovation ideas. As a result, the strategic role of IMS becomes broader and increasingly relevant in addressing the complex dynamics of the modern innovation landscape.

The study in [4] highlights the Kaizen Teian suggestion system as a structured tool to enhance employee participation in continuous improvement. By formalizing the process of idea submission, evaluation, and follow-up, the system fosters engagement, transparency, and accountability. The authors emphasize that such systems not only support innovation but also contribute to knowledge sharing and participative decision-making, making them essential in sustaining organizational improvement efforts.

### **3. Method**

In order to examine how Idea Management Systems (IMS) aid Continuous Improvement (CI), this study uses a Systematic Literature Review (SLR) methodology. The SLR approach was selected because it offers a transparent, reproducible, and organized synthesis of the body of research that supports two key hypotheses.

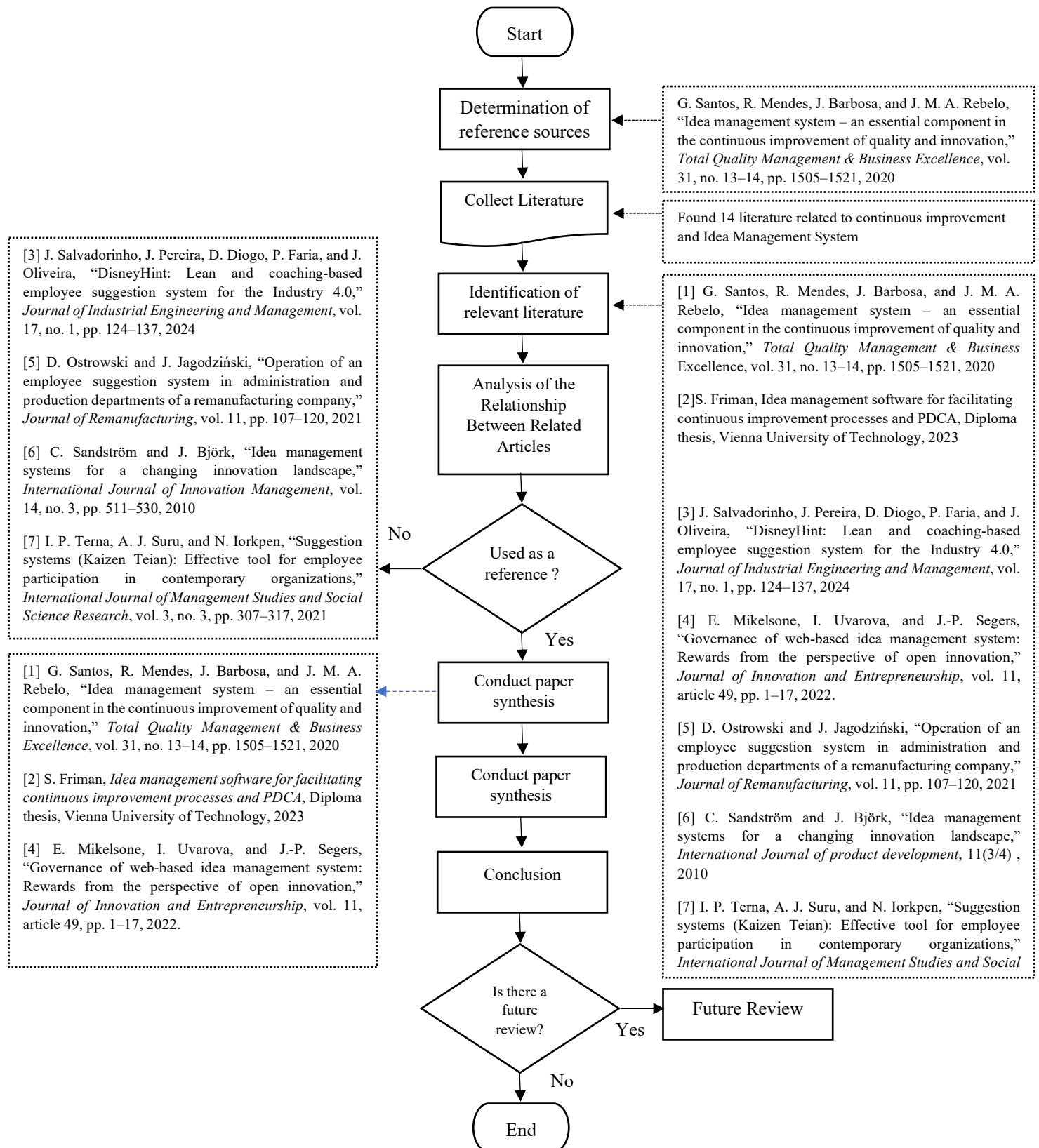
The first phase involved the determination of reference sources, in which scholarly databases using the same keyword and advanced search features. Article databases that were used were Science Direct, Google Scholar, Taylor & Francis Online, and MDPI. This yielded an initial set of 14 articles published between 2010 and 2024.

In the second phase, a relevance assessment was conducted to identify which articles explicitly discussed the relationship between IMS and CI. From this pool, 7 articles were classified as highly relevant, as they not only referenced IMS directly but also examined its implementation outcomes, governance structures, and alignment with organizational improvement objectives.

The third phase focused on the analysis of inter-article relationships to identify overlaps, contributions, and theoretical consistencies. Articles were examined through the PCLMF framework—Preview, Contribution, Limitation, Methodology, and Future Research—to ensure a standardized evaluation of content.

Subsequently, only 3 of the 7 relevant papers were selected for in-depth synthesis, based on their empirical robustness and direct alignment with the study's two hypotheses. Finally, the synthesis stage was followed by an examination of whether each selected study included future research directions, which informed the concluding analysis and shaped recommendations for subsequent empirical validation.

This methodology ensures a rigorous, transparent, and academically grounded synthesis, enabling this research to derive insights and theoretical implications from cross-study comparisons while maintaining methodological consistency.



**Figure 1.** Literature review framework using the PCLMF synthesis process

#### **4. Result And Discussion**

The systematic synthesis of three key studies reveals consistent evidence that structured implementation of Idea Management Systems (IMS) significantly contributes to both the quality and sustainability of Continuous Improvement (CI) initiatives within organizations.

By conducting empirical case studies on two manufacturing companies, it showed that formal IMS, when backed by reward systems, managerial involvement, transparency, and result-oriented frameworks, resulted in significant cost-saving innovations and increased employee participation [3]. According to the study, companies with well-defined objectives and proactive leadership can transform employee creativity into quantifiable performance outcomes. One company reported saving over 4.9 million euros in a single year from 707 approved ideas. This directly addresses H1 by demonstrating that a well-designed IMS has a positive effect on the quantity and value of employee suggestions, as well as H2, since formal governance mechanisms like acknowledgment and open feedback loops ensured that improvement efforts were sustained.

A qualitative and quantitative evaluation of IMS implementation in a lean manufacturing environment [1]. The study emphasizes how idea submission rates were raised while idea quality was maintained by using digital platforms for idea gathering. In order to encourage participation, coaching-based facilitation, integrated feedback, and user-friendly design were essential. These results corroborate H1, demonstrating that IMS platform structure and usability affect idea quality and facilitate sustained CI by making engagement simple. The necessity of managerial commitment and feedback—two important themes in H2—is further reinforced by Friman's emphasis on the cultural and motivational dynamics necessary for IMS to be more than just a technical tool.

The governance of web-based IMS in companies that value open innovation was the main topic [5]. Their empirical analysis identified seven key governance mechanisms that directly impact the effectiveness of IMS:

1. Clearly defined corporate objectives for brainstorming,
2. Ownership of the idea is clearly assigned,
3. Systems of rewards that are transparent,
4. Organized evaluation procedures,
5. Ongoing feedback loops,
6. Digital visibility of the status of ideas, and
7. IMS integration with a more comprehensive innovation strategy.

These results give thorough support for H2, demonstrating that governance mechanisms, particularly reward and feedback systems, have a statistically significant impact on user engagement, idea quality, and the sustainability of CI practices.

Regardless of platform sophistication, the study finds that companies with unstructured IMS governance frequently have low ideation impact. Three key points of discussion come out of these studies:

1. System structure is important: Platforms that standardize the processes for receiving, evaluating, and providing feedback on ideas promote ongoing participation and preserve the caliber of ideas (H1).
2. Sustainability is improved by governance mechanisms: Long-term CI is supported by an innovative culture that is fostered by feedback loops, managerial support, and recognition systems (H2).

3. Cultural alignment is crucial: To fully achieve CI objectives, even the most advanced IMS tools need organizational dedication to transparency, communication, and leadership visibility.

This triangulated synthesis demonstrates that, in addition to promoting employee-driven idea generation, structured IMS allows organizations to integrate continuous improvement (CI) as a long-term operational philosophy when backed by strong governance frameworks.

## **5. Conclusion**

By converting employee insights into organized organizational learning, Idea Management Systems (IMS) are essential to operationalizing Continuous Improvement (CI). In the age of knowledge-intensive and innovation-driven workplaces, IMS offers a strategic platform that encourages involvement, openness, and continuous improvement in addition to a formal mechanism for gathering and assessing ideas. The foundations of CI are strengthened by this systematic literature review, which demonstrates that structured IMS implementation greatly improves the caliber and volume of employee-submitted ideas (H1). Additionally, it has been demonstrated that the existence of governance mechanisms—such as clear incentive structures, feedback loops, and managerial ownership—allows for more consistent and predictable CI results over time (H2).

The study's conclusions have significant theoretical and managerial ramifications. From a managerial implications, companies should see IMS as a strategic infrastructure that fosters ongoing engagement, cross-functional cooperation, and an innovative culture rather than just as a technical tool or suggestion box. To encourage consistent participation and trust, managers are encouraged to deploy IMS with well-defined workflows, open feedback channels, and organized incentive schemes. According to theory, this study advances our knowledge of IMS as a socio-technical system that connects organizational learning, performance enhancement, and employee-driven ideation. By highlighting the governance aspect of IMS—specifically, how formal structures, incentive systems, and feedback loops are essential to integrating continuous improvement as a scalable and replicable organizational process—it advances the CI literature.

Despite offering valuable insights, this study acknowledges several limitations inherent in the primary sources synthesized :

1. Dependency on Organizational Scale

Large or mid-sized organizations with established operational structures are the main focus of the chosen studies. Because of this, it is still unclear whether structured IMS can be applied to small businesses or less formal settings, especially in situations where there may not be dedicated improvement teams or digital platforms.

2. Employee Participation Variability

Contextual elements like system transparency, incentive systems, and leadership commitment have a significant impact on the level of IMS participation. These factors may affect the consistency of CI results across organizations, but the reviewed studies provide little quantitative evaluation of them.

3. Unrecognized Cultural Impact

Although often mentioned, organizational culture—in particular, openness to feedback, trust in management, and a collective learning orientation—is not



adequately examined. Further research is necessary to fully understand its intricate role in determining IMS efficacy and CI sustainability.

These limitations draw attention to the need for caution when extrapolating the findings and provide opportunities for more detailed, cross-sectoral studies to confirm the wider relevance of IMS-driven continuous improvement.

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### 6. References

- [1] S. Friman, Idea management software for facilitating continuous improvement processes, Diploma thesis, Vienna University of Technology, 2023
- [2] J. Salvadorinho, J. Pereira, D. Diogo, P. Faria, and J. Oliveira, "DisneyHint: Lean and coaching-based employee suggestion system for the Industry 4.0," *Journal of Industrial Engineering and Management*, vol. 17, no. 1, pp. 124–137, 2024
- [3] G. Santos, R. Mendes, J. Barbosa, and J. M. A. Rebelo, "Idea management system – an essential component in the continuous improvement of quality and innovation," *Total Quality Management & Business Excellence*, vol. 31, no. 13–14, pp. 1505–1521, 2020
- [4] I. P. Terna, A. J. Suru, and N. Iorkpen, "Kaizen teian employee suggestion scheme: A tool for participative decision making in a tertiary institution," *International Journal of Business and Management Invention*, vol. 10, no. 7, pp. 1–8, July 2021
- [5] E. Mikelsone, I. Uvarova, and J.-P. Segers, "Governance of web-based idea management system: Rewards from the perspective of open innovation," *Journal of Innovation and Entrepreneurship*, vol. 11, article 49, pp. 1–17, 2022.
- [6] E. Mikelsone, I. Uvarova, and J.-P. Segers, "Four-step approach to idea management sequencing: redefining or reinventing values in a business model," *\*Journal of Open Innovation: Technology, Market, and Complexity\**, vol. 8, no. 4, art. no. 181, pp. 1–17, 2022.
- [7] D. Ostrowski and J. Jagodziński, "Operation of an employee suggestion system in administration and production departments of a remanufacturing company," *Journal of Remanufacturing*, vol. 11, pp. 107–120, 2021
- [8] J. Wallisser, "Idea management systems in practice: An exploratory case study," *\*Journal of Organizational Change Management\**, vol. 34, no. 3, pp. 499–517, 2021. M. Young, *The Technical Writer's Handbook*. Mill Valley, CA: University Science, 1989.
- [9] C. Sandström and J. Björk, "Idea management systems for a changing innovation landscape," *\*International Journal of Innovation Management\**, vol. 14, no. 3, pp. 511–530, 2010
- [10] P. Sinurat, Pawenary, Safuan, and E. Hamdi, "Green employee engagement for environmental sustainability and operational excellence in the palm oil industry:

A systematic literature review," *Journal of Business, Social and Technology*, vol. 7, no. 2, pp. 198–215, 2025.

- [11] Pawenary, H. Purnomo, and W. N. Cahyo, "Safety Hazards Detections in Electrical Industry: A Systematic Literature Review,"