
**ENHANCING OPERATIONAL PERFORMANCE WITH TOTAL QUALITY
MANAGEMENT IN THE HOUSING AND SETTLEMENT
DEPARTMENT OF KUTAI KARTANEGARA****Restu Irawan^{*}, Zainal Abidin, Ike Purnamasari**

Faculty of Economics and Business, Universitas Mulawarman, Samarinda, Indonesia

E-mail: restuirawan@gmail.com*, Ike.purnamasari@feb.unmul.ac.id, zainal.abidin@feb.unmul.ac.id

Received: 01/04/2026 | Revised : 10/04/2026 | Accepted: 15/05/2026 | Published : 24/05/2026

Abstract

This study aims to examine the application of Total Quality Management (TQM) principles in the formulation of the Annual Work Plan (RKT) at the Housing and Settlement Department of Kutai Kartanegara Regency and to identify factors hindering its implementation. This research employed a qualitative approach involving eight informants. The findings show that the implementation of TQM principles, including customer focus, continuous improvement, and teamwork, contributed to improving planning quality and program execution. Customer focus ensured that the RKT was prepared based on community needs, while continuous improvement encouraged regular evaluation and enhancement of planning processes. Teamwork among departments strengthened coordination and supported more effective work plan preparation. However, several obstacles were identified, including inaccurate data, limited resources, and weak interdepartmental coordination, which reduced planning effectiveness and hindered program implementation. Therefore, improving data accuracy, strengthening coordination, and providing adequate resources are necessary to support more effective and efficient implementation of work programs.

Keywords: Total Quality Management; Annual Work Plan; Operational Performance.

INTRODUCTION

The Department of Housing and Settlement Areas of Kutai Kartanegara Regency has an important role in managing housing and settlement programs. One of the key instruments used to guide annual programs and activities is the Annual Work Plan, known as the Rencana Kerja Tahunan (RKT). The RKT functions as an operational planning document that translates strategic objectives into annual programs, targets, and activities. Therefore, the quality of RKT preparation strongly influences the effectiveness of program implementation and the achievement of departmental operational performance.

However, the preparation of the RKT still faces several challenges. These include limited human resource capacity, weak understanding of sustainable development principles, limited use of baseline data, and coordination problems among divisions. In some cases, planning decisions are not fully supported by accurate and updated data, which may affect the determination of program priorities. In addition, the tendency to focus on physical outputs rather than long-term outcomes can reduce the sustainability of development programs. These conditions indicate that improving operational performance requires not only stronger implementation capacity, but also better planning quality.

To address these issues, Total Quality Management (TQM) can be used as a relevant managerial approach. TQM emphasizes citizen or customer focus, leadership commitment, employee involvement, continuous improvement, teamwork, process management, and data-based decision-making. In the public sector, these principles are important because government organizations are expected to provide services that are accountable, efficient, responsive, and oriented toward public needs. When applied to the RKT preparation process, TQM can support more systematic planning, stronger coordination, better use of data, and continuous evaluation of programs.

Previous studies have shown that TQM can improve organizational performance through better process management, employee involvement, coordination, and continuous improvement. Juganath & Naranjee, (2017) found that TQM practices can support operational performance by improving process quality and employee

participation. Rasyidah et al., (2022) also showed that the application of quality management systems can improve planning quality in public organizations. In addition, Reitandi et al., (2024) emphasized that TQM can strengthen administrative efficiency and communication among organizational units. However, Fadli, (2024) noted that the effectiveness of TQM depends on organizational readiness, resource capacity, and the ability of institutions to apply quality management principles consistently. Although previous studies have discussed the contribution of TQM to organizational performance, most of them have focused on industrial, service, educational, or general administrative contexts. Studies that specifically examine the implementation of TQM in the preparation of annual work plans in local government institutions remain limited. This gap is important because the RKT is a strategic planning instrument that determines annual program priorities, resource allocation, and performance targets in public sector organizations.

Therefore, this study aims to examine the implementation of Total Quality Management principles in the preparation of the Annual Work Plan at the Department of Housing and Settlement Areas of Kutai Kartanegara Regency. This study also identifies the factors that hinder the implementation of TQM in the RKT preparation process and explores how TQM contributes to improving departmental operational performance. The findings are expected to contribute to public management literature and provide practical insights for improving planning quality and operational performance in local government institutions.

LITERATURE REVIEW

Total Quality Management

Hughes & Williams, (2018), total quality management (TQM) is a managerial system that ensures quality is the primary focus in every aspect of the organization. This includes continuous process improvement, enhanced employee involvement, and effective management of change focused on achieving better results. By involving every member of the organization in improving quality, TQM encourages achieving greater efficiency and effectiveness in performing tasks and delivering services. Then, according to Oakland, (2019), total quality management (TQM) is a managerial approach that involves all members of an organization to focus on continuous improvement in processes, products, and services. This approach emphasizes the importance of collaboration between all levels of the organization and decision-making based on data and facts. TQM aims to improve quality comprehensively and ensure that every element within the organization plays an active role in achieving high-quality standards. Meanwhile, Heizer, Render, & Munson, (2020), "total quality management (TQM) refers to a quality emphasis that encompasses the entire organization, from supplier to customer. TQM stresses a commitment by management to have a continuing companywide drive toward excellence in all aspects of products and services that are important to the customer. Total quality management (TQM) is Management of an entire organization so that it excels in all aspects of products and services that are important to the customer.

Annual Work Plan

The Annual Work Plan, or Rencana Kerja Tahunan (RKT), is an important managerial instrument used to guide policy implementation and ensure the achievement of annual performance targets in local government agencies. Tangkilisan, (2018) states that the RKT plays a strategic role in maintaining consistency between planning, budgeting, program implementation, and operational performance measurement in public sector organizations. Mardiasmo, (2018) explains that the RKT contains priorities, output indicators, and organizational resource allocations, which serve as the basis for budget preparation and performance monitoring. Similarly, Mahmudi, (2019) describes the RKT as an annual performance document that connects the Strategic Plan (Renstra) with the budgeting process and functions as a control tool for achieving organizational performance.

Operational Performance

Operational performance refers to the effectiveness of an organization's internal processes in achieving efficiency, quality, flexibility, and timely delivery. According to, Krajewski et al., (2019), state that operational performance encompasses key metrics such as productivity, quality, cycle time, and process reliability. Then, according to Mahadevan, (2019), emphasizes that operational performance depends on a firm's ability to integrate technology, human resources, and work systems to create value and process efficiency. Furthermore, Heizer, Render, & Munson, (2020), define operational performance as the ability of an organization to manage its operational activities effectively in producing quality products or services, ensuring timely delivery, and utilizing resources efficiently. Meanwhile, Stevenson, (2021), operational performance refers to the outcomes of a company's processes in terms of cost, quality, flexibility, and delivery.

Research Framework

Based on the literature review and previous empirical studies, this study develops an analytical framework to explain the implementation of Total Quality Management (TQM) in the preparation of the Annual Work Plan (RKT). The framework begins with the internal planning problems faced by the Department of Housing and Settlement Areas of Kutai Kartanegara Regency, such as limited data quality, coordination challenges, limited understanding of technical processes, and the need to improve planning quality.

These problems indicate the importance of applying TQM principles, including citizen focus, quality leadership, employee involvement, continuous improvement, data-driven management, process management, and teamwork. The implementation of these principles is expected to improve the RKT preparation process through better data use, clearer targets and indicators, stronger coordination among divisions, and more systematic program planning. In turn, an improved RKT preparation process is expected to contribute to better departmental operational performance, particularly in terms of program targeting, achievement of RKT indicators, planning quality, accountability, and public service quality. The research framework is presented in Figure 1.

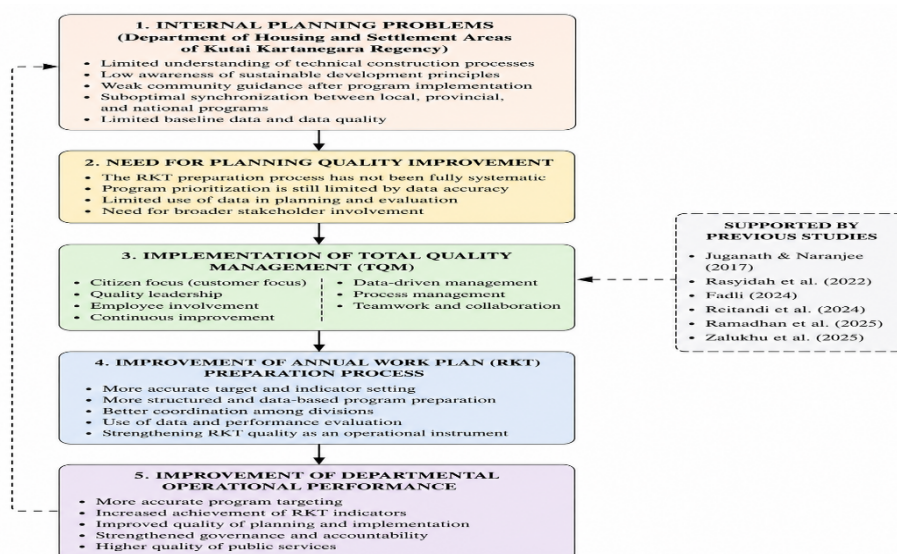


Figure 1. Analytical Framework of TQM Implementation in RKT Preparation

Source: Developed by the author, 2026.

Based on Figure 1 illustrates the analytical framework of this study. The framework shows that internal planning problems, such as limited data quality, coordination challenges, and the need to improve planning quality, become the basis for applying Total Quality Management (TQM) in the preparation of the Annual Work Plan (RKT). The implementation of TQM principles, including citizen focus, leadership, employee involvement, continuous improvement, data-driven management, process management, and teamwork, is expected to improve the RKT preparation process. In turn, a better RKT preparation process can contribute to improved departmental operational performance through more accurate program targeting, better achievement of RKT indicators, stronger accountability, and higher quality public services.

METHOD

Research Design

This study employs a qualitative research approach to explore the implementation of Total Quality Management (TQM) principles in the formulation of the Annual Work Plan (RKT) and to identify factors that hinder its effective implementation. A qualitative design is considered appropriate as it enables an in-depth understanding of organizational processes, interactions, and contextual challenges within a public sector institution.

Research Focus

This study focuses on the implementation of Total Quality Management (TQM) in the preparation of the Annual Work Plan (RKT) at the Department of Housing and Settlement Areas of Kutai Kartanegara Regency. The analysis covers key TQM principles, including citizen focus, leadership, employee involvement, continuous improvement, data-based decision-making, process management, and teamwork. This study also examines the

factors that hinder the implementation of TQM in the RKT preparation process and explores its contribution to improving the department's operational performance, particularly in planning accuracy, work efficiency, coordination, program target achievement, and public service quality.

Research Informants

This study used purposive sampling to select informants who were directly involved in the preparation of the Annual Work Plan (RKT) and had relevant knowledge about the implementation of Total Quality Management (TQM) at the Department of Housing and Settlement Areas of Kutai Kartanegara Regency. The selection of informants was based on their position, duties, involvement in planning, coordination, program implementation, and evaluation.

The study involved eight informants, consisting of one key informant, four main informants, two supporting informants, and one external informant. The key informant was the Acting Head of the Department, who provided information related to policy direction, program priorities, and performance evaluation. The main informants included the heads of divisions related to housing, settlement areas, public infrastructure, and technical administration. Supporting informants consisted of staff involved in infrastructure implementation and planning document preparation. Meanwhile, the external informant was represented by a village head or community representative as the beneficiary of public services.

Data Analysis Techniques

Data analysis in this study used the interactive model of Miles et al., (2020), consisting of data reduction, data display, and conclusion drawing and verification. Data from interviews, observations, and documentation were reduced by selecting relevant information related to the implementation of Total Quality Management (TQM), the preparation of the Annual Work Plan (RKT), inhibiting factors, and operational performance. The reduced data were then presented in thematic narratives, tables, and visualizations. NVivo 15 was used to support the coding process, organize themes, and identify relationships between concepts through word cloud, hierarchy chart, cluster analysis, and matrix coding query. Conclusions were drawn based on patterns and meanings found in the analysed data. The findings were verified through source triangulation, technique triangulation, member checking, and thick description to ensure that the results were credible, contextual, and aligned with the actual field conditions.

RESULTS AND DISCUSSION

The findings of this study were generated from thematic coding using NVivo 15. The analysis identified three main themes: the implementation of Total Quality Management (TQM) in the preparation of the Annual Work Plan (RKT), inhibiting factors in TQM implementation, and the contribution of TQM implementation in RKT preparation to operational performance. These themes were developed from interviews, observations, and documentation involving internal and external informants of the Department of Housing and Settlement Areas of Kutai Kartanegara Regency. To provide a clearer overview of the findings, the coding results were summarized into several main themes, sub-themes, and key findings. This summary helps explain how the data were organized and how the main research findings were developed from the coding process, as shown in Table 1.

Table 1. Main Themes Generated from NVivo Coding

Main Theme	Sub-theme	Key Finding
Implementation of TQM in RKT preparation	Citizen focus, leadership, employee involvement, teamwork, continuous improvement, data-based planning, and process management	TQM is reflected through community-oriented planning, internal coordination, data use, annual evaluation, and structured planning procedures.
Inhibiting factors in TQM implementation	Data limitation, coordination issues, and resource constraints	TQM implementation is constrained by inaccurate housing backlog data, coordination challenges, and limited organizational resources.
Contribution of TQM implementation in RKT preparation to operational performance	Planning accuracy, work efficiency, program achievement, coordination, and public service quality	TQM supports more structured planning, clearer program priorities, better coordination, and improved public service delivery.

Based on Table 1 shows that the findings are organized into three interrelated themes. The first theme explains how TQM principles are implemented in the RKT preparation process. The second theme identifies the main factors that hinder the implementation of TQM. The third theme describes how TQM implementation in RKT preparation contributes to improving the department’s operational performance. In addition to the thematic summary, this study also used a Matrix Coding Query in NVivo 15 to examine the distribution of the main themes across informants. This analysis was used to identify which themes appeared more strongly in each informant group and to support the interpretation of qualitative findings. The results of the Matrix Coding Query are presented in Table 2.

Table 2. The Result of Matrix Coding Query (Column Percentage)

	A : INF-1	B : INF-2	C : INF-3	D : INF-4	E : INF-5	F : INF-6	G : INF-7	H : INF-8
1 : Inhibiting factors	1.94%	8.29%	0%	0%	0%	0%	0%	0%
2 : Operational performance	4.36%	5.9%	13.56%	10.21%	0%	0%	0%	0%
3 : TQM implementation	49.64%	34.13%	41.14%	47.45%	37.32%	49.19%	52.38%	14.53%
4 : RKT preparation	44.07%	51.69%	45.3%	42.34%	62.68%	50.81%	47.62%	85.47%

Source: Processed by the author using NVivo 15, 2026.

Based on Table 2 indicates that the themes of TQM implementation and RKT preparation appeared consistently across most informants. The RKT preparation theme was particularly dominant among informants who were directly connected to planning processes and community needs, while the TQM implementation theme appeared strongly among internal informants involved in coordination, data preparation, and program planning. Meanwhile, the inhibiting factors theme appeared more specifically in relation to data limitations and planning constraints. This finding supports the interpretation that the implementation of TQM in RKT preparation is closely related to coordination, data use, community orientation, and operational performance improvement. After identifying the main themes and their distribution across informants, the discussion is organized into three sections: the implementation of TQM in RKT preparation, inhibiting factors in TQM implementation, and the contribution of TQM implementation in RKT preparation to operational performance.

Implementation of TQM in RKT Preparation

The findings show that the implementation of Total Quality Management (TQM) in the preparation of the Annual Work Plan (RKT) is reflected in citizen-oriented planning, internal coordination, employee involvement, data use, and annual evaluation. The RKT preparation process is not only an administrative activity, but also a structured planning mechanism that connects community needs, policy direction, and organizational targets.

The principle of citizen focus is reflected in the use of community proposals and previous planning data as the basis for preparing the RKT. One informant stated:

“The preparation of the annual work plan also uses previous data and community proposals, either through Musrenbang or through proposals submitted to the Department of Housing and Settlement Areas.”

(INF-1, Acting Head of Department)

This statement indicates that the preparation of the RKT considers both previous data and community aspirations. In the context of TQM, this reflects citizen focus because public needs become an important basis for determining program priorities. The findings also show that teamwork and employee involvement are important in preparing planning documents. Coordination among employees and divisions supports the preparation of more complete and integrated planning data.

“In the process of preparing the document, all employees support each other. The required data are often interconnected among employees, so everyone works together to fulfil the needs of the planning document.”

(INF-7, Planning Staff)

This finding shows that the quality of RKT preparation depends on coordination and collaboration among organizational members. From the TQM perspective, teamwork and employee involvement help improve planning quality and support more effective program implementation.

Inhibiting Factors in TQM Implementation

Although TQM principles have been applied in the RKT preparation process, several inhibiting factors still affect the quality of planning and operational performance. The main obstacles include data limitations, coordination issues, and resource constraints. One of the most important inhibiting factors is the limitation of accurate and updated data, especially housing backlog data. This issue may affect the accuracy of program priorities and reduce the effectiveness of planning.

“Another challenge is the limitation of data, particularly housing backlog data, which is currently not fully accurate.” *(INF-2, Head of Housing Division)*

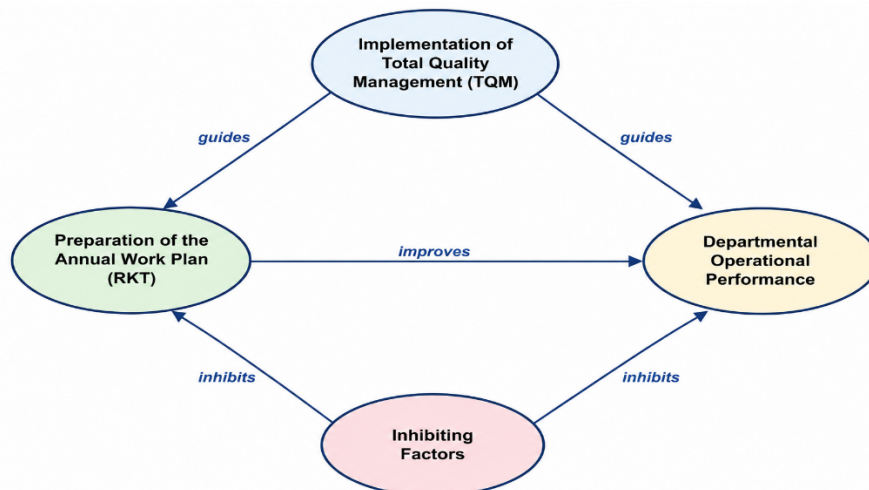
This finding indicates that data accuracy is essential in the implementation of TQM. In data-based decision-making, planning should be supported by valid and updated information. When data are incomplete or inaccurate, the RKT preparation process may become less responsive to actual community needs. In addition, coordination among divisions remains a challenge. Although coordination has been conducted, differences in priorities, data availability, and program implementation may affect the effectiveness of the planning process. Limited resources, including budget and human resources, also influence the implementation of programs that have been planned in the RKT.

Contribution of TQM Implementation in RKT Preparation to Operational Performance

The implementation of TQM in RKT preparation contributes to improving operational performance by strengthening planning accuracy, work efficiency, coordination, program achievement, and public service quality. Through citizen focus, teamwork, data-based planning, and continuous improvement, the department can prepare programs that are more structured and relevant to community needs. Annual evaluation is one of the important mechanisms that supports continuous improvement. Evaluation helps the department assess whether the programs have been effective and whether they have provided direct benefits to the community.

“Evaluation of settlement programs is very important so that we can determine whether the programs have been effective and have provided positive impacts for the community, particularly in improving the quality of habitable settlements.” (INF-6, Infrastructure and Regional Staff)

This finding suggests that evaluation plays an important role in assessing program effectiveness and its impact on the community. From the TQM perspective, evaluation is part of continuous improvement because it provides feedback for improving future planning and implementation. To further illustrate the relationship between TQM implementation, RKT preparation, inhibiting factors, and operational performance, a concept map is presented, as shown in Figure 2.



Source: Processed by the author using NVivo 15, 2026.

Based on Figure 2, the implementation of Total Quality Management (TQM) plays an important role in guiding the preparation of the Annual Work Plan (RKT) and improving departmental operational performance. The figure shows that TQM provides direction for the RKT preparation process through citizen focus, teamwork, continuous improvement, and data-based planning. A well-prepared RKT then contributes to better operational performance by improving planning accuracy, coordination, program achievement, and public service quality. However, the figure also shows that inhibiting factors may affect both the RKT preparation process and operational performance. These inhibiting factors include data limitations, coordination challenges, and resource constraints. Therefore, the implementation of TQM will be more effective if the department strengthens data management, improves inter-division coordination, and ensures adequate resources to support program implementation. Overall, the concept map indicates that TQM implementation, RKT preparation, and operational performance are interconnected within a continuous improvement process.

Discussion

Overall, the findings show that TQM can be applied as a managerial approach in public sector planning. The principles of citizen focus, teamwork, continuous improvement, and data-based decision-making are reflected in the preparation of the RKT. These principles help the department prepare more structured, responsive, and coordinated programs. The findings also indicate that the success of TQM implementation depends on the availability of accurate data, effective coordination, and adequate organizational resources. Therefore, TQM does not only require formal planning procedures, but also institutional readiness, employee involvement, and continuous evaluation. In the context of the Department of Housing and Settlement Areas of Kutai Kartanegara Regency, TQM contributes to improving operational performance by strengthening planning quality, supporting program implementation, and improving public service orientation. However, the contribution of TQM will be more effective if the department improves data management, strengthens inter-division coordination, and ensures sufficient resources for program implementation.

Conclusion

This study shows that the implementation of Total Quality Management (TQM) in the preparation of the Annual Work Plan (RKT) is reflected through citizen focus, continuous improvement, teamwork, data-based

planning, and coordination among divisions. These principles support the department in preparing a more structured, responsive, and community-oriented annual work plan. Citizen focus helps ensure that the RKT considers community needs, while continuous improvement allows previous evaluations and feedback to be used for improving future planning and program implementation. The study also found several inhibiting factors that affect the effectiveness of TQM implementation, including limited data accuracy, coordination challenges among divisions, and resource constraints. Inaccurate or incomplete data may affect the determination of program priorities, while weak coordination and limited resources may reduce the effectiveness of program implementation. Therefore, strengthening data management, improving inter-division coordination, and enhancing organizational capacity are important to support the implementation of TQM in public sector planning.

Overall, the implementation of TQM in RKT preparation contributes to improving departmental operational performance by supporting planning accuracy, work efficiency, program achievement, and public service quality. These findings suggest that TQM can be used as a relevant managerial approach to improve the quality of planning and operational performance in local government institutions.

Recommendations

Based on the findings, the Department of Housing and Settlement Areas of Kutai Kartanegara Regency should strengthen its data management system to ensure that the data used in preparing the Annual Work Plan are accurate, integrated, and regularly updated. This is important because reliable data support more appropriate program priorities and better planning decisions. The department also needs to improve coordination among divisions through regular internal forums, strengthen staff capacity in quality management and planning, and ensure adequate resources for priority programs. In addition, community involvement in planning forums, such as Musrenbang and public consultation mechanisms, should be strengthened so that the RKT remains responsive to actual community needs. Future studies are encouraged to examine stakeholder involvement in greater depth, particularly the role of communities and external partners in the RKT preparation process. Further research may also explore data management systems in public sector planning or compare the implementation of TQM across different departments or local government institutions.

Limitations of the Study

This study has several limitations. First, the research involved a limited number of informants from the Department of Housing and Settlement Areas of Kutai Kartanegara Regency. Therefore, the findings may not be fully generalizable to other departments or regions with different organizational characteristics. Second, this study focused only on one local government department and did not include other public sectors or institutions. As a result, the findings mainly reflect the context of housing and settlement planning in Kutai Kartanegara. Future research involving more departments, regions, or comparative case studies would provide a broader understanding of TQM implementation in public sector planning.

REFERENCES

- Fadli, A. D. (2024). Implementation of Total Quality Management (TQM) in Improving Product Quality in Manufacturing Companies. *Maroon Journal De Management*, 1(2), 74–84. <https://doi.org/https://doi.org10.37899/mjdm.v1i2.97>
- Heizer, J., Render, B., & Munson, C. (2020). *Operations Management: Sustainability and Supply Chain Management*. Pearson Education Limited.
- Hughes, S., & Williams, A. (2018). *Quality Management for Organizational Excellence*. Pearson Education.
- Juganath, N., & Naranjee, N. (2017). An Investigation into the Implementation of a Total Quality Management System to Improve Operational Performance at a Fleet Management Company within a Government Organisation. *International Journal of Managerial Studies and Research (IJMSR)*, 5(2), 31–48. <https://doi.org/http://dx.doi.org/10.20431/2349-0349.0502004>
- Krajewski, L. J., & Ritzman, L. P. (2021). *Operations Management: Processes and Supply Chains* (12th ed). Pearson Education.
- Mahadevan, B. (2019). *Operations Management: Theory and Practice* (3rd ed). Pearson Education.
- Mahmudi. (2019). *Manajemen Kinerja Sektor Publik*. UPP STIM YKPN.
- Mardiasmo. (2018). *Akuntansi Sektor Publik*. CV Andi Offset.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative Data Analysis: A Methods Sourcebook* (4th ed). SAGE Publications Inc.

ENHANCING OPERATIONAL PERFORMANCE WITH TOTAL QUALITY MANAGEMENT IN THE HOUSING AND SETTLEMENT DEPARTMENT OF KUTAI KARTANEGARA

Restu Irawan **et al**

- Oakland, J. S. (2019). *Total Quality Management and Operational Excellence: Text with Cases*. Routledge.
- Rasyidah, A. N., Bariroh, A., & Rahmawati, D. E. (2022). Analisis Total Quality Management (TQM) Dalam Meningkatkan Mutu Manufaktur Dan Jasa Pada PT. Dahana (Persero) Subang. *Sibatik Journal : Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 1(12), 2917–2926. <https://publish.ojs-indonesia.com/index.php/SIBATIK>
- Reitandi, Aslami, N., & Nurbaiti. (2024). Penerapan Implementasi Total Quality Management (TQM) Dalam Meningkatkan Kualitas Pelayanan Administrasi Pada Dinas Kesehatan Kabupaten Deli Serdang. *Scientific Journal of Reflection: Economic, Accounting, Management and Business*, 7(1), 271–282.
- Stevenson, W. J. (2021). *Operations Management* (Fourteenth). McGraw - Hill.
- Tangkilisan, H. N. S. (2018). *Manajemen Modern untuk Sektor Publik: Strategic Management, Total Quality Management, Balanced Scorecard, Scenario Planning*. Balairung & Co.