Luxury: Landscape of Business Administration

Creating Business Value through IoT-Based Waste Management Web Dashboard

Wilda Susanti [a], Nicholas Renaldo [b*], Achmad Tavip Junaedi [b], Mukhsin Mukshin [a], Johan Johan [a], Yulvia Nora Marlim [a], Gusrio Tendra [a], Wahyu Joni Kurniawan [a], Fauzan Azim [c]

[a] Faculty of Computer Science, Institut Bisnis dan Teknologi Pelita Indonesia, Indonesia

[b] Business Faculty, Institut Bisnis dan Teknologi Pelita Indonesia, Indonesia

[c] Faculty of Education, Universitas Muhammadiyah Riau, Indonesia

*Corresponding Author: nicholasrenaldo@lecturer.pelitaindonesia.ac.id

Article History
Received
17 September 2025
Revised
19 October 2025
Accepted
1 December 2025
Published
5 January 2026

ABSTRACT

The rapid growth of urbanization and industrial activities has increased the complexity of waste management operations within business organizations, leading to rising costs and managerial challenges. While the Internet of Things (IoT) has enabled real-time data collection in waste management, business value creation depends on how such data are integrated into managerial information systems. This study aims to develop and evaluate an IoT-based waste management web dashboard that supports operational monitoring and managerial decision-making to create business value. Using a Design Science Research (DSR) methodology, this study designs an integrated system that collects real-time waste volume data through IoT-enabled sensors and presents the information via a centralized web dashboard. The system is evaluated using a mixed approach combining operational performance indicators and user perceptions based on Information Systems Success Theory. The results indicate improvements in operational efficiency, resource allocation, and decision-making quality following system implementation. The findings demonstrate that the proposed web dashboard functions as a strategic managerial information system rather than a purely technical solution. By enhancing information quality and managerial control, the system contributes to business value creation through improved operational performance and supports digital transformation and sustainability-oriented business practices. This study contributes to the business and management literature by shifting the focus of IoT-based waste management research from technical performance to managerial relevance and value creation.

Keywords: IoT-based Waste Management; Web Dashboard; Business Value Creation; Digital Transformation; Managerial Decision-Making; Sustainability

Field: Digital Business; Management Information Systems; Operations and Supply Chain Management; Sustainability and Green Business; Business Analytics

DOI: https://doi.org/10.61230/luxury.v4i1.139

SDGs: Industry, Innovation and Infrastructure (9); Sustainable Cities and Communities (11); Responsible Consumption and Production (12); Climate Action (13)

INTRODUCTION

The rapid growth of urbanization and industrial activities has significantly increased the volume of waste generated by business organizations, creating complex operational and managerial challenges (Leknoi et al., 2024). Inefficient waste management practices not only lead to rising operational costs but also expose organizations to environmental risks and reputational pressures (Hossain et al., 2024). In the context of digital transformation (Fransisca et al., 2025), businesses are increasingly required to adopt innovative solutions that simultaneously enhance operational efficiency, support sustainability objectives, and create measurable business value (Zulkifli et al., 2023).

The emergence of the Internet of Things (IoT) has enabled organizations to collect real-time data from physical assets (Susanti et al., 2024), transforming traditionally manual and reactive waste management processes into data-driven systems (Renaldo, Elvina, et al., 2025). However, the mere deployment of IoT sensors does not automatically generate business value (Renaldo & Murwaningsari, 2023). The true value of IoT lies in the organization's ability to integrate collected data into information systems that support managerial decision-making

(Renaldo, Junaedi, et al., 2024), performance monitoring (Renaldo, 2024), and strategic planning (Renaldo & Fransisca, 2024). Web-based dashboards play a critical role in this integration by converting raw data into actionable insights that can be easily accessed by managers and operational staff (Renaldo et al., 2021).

From a business perspective, effective waste management extends beyond environmental compliance and cost reduction (Hariyani et al., 2025). It represents an opportunity to improve resource utilization, optimize operational workflows, and support sustainability-oriented business models. Real-time visibility of waste volume, collection frequency, and operational performance enables organizations to reduce unnecessary collection activities, minimize downtime, and allocate resources more efficiently. Consequently, waste management systems that leverage IoT and web-based platforms can contribute directly to operational excellence and long-term competitive advantage (Jahrizal et al., 2025).

Despite the growing adoption of IoT in environmental and waste management applications, existing studies predominantly emphasize technical system design, sensor accuracy, and hardware performance. Limited attention has been given to how IoT-based waste management systems create business value through improved information quality, managerial control, and decision-making effectiveness (Junaedi, Renaldo, Susanti, et al., 2024). This gap is particularly evident in the business and management literature, where empirical and design-oriented studies that link IoT-enabled systems to value creation remain scarce (Renaldo, Fransisca, et al., 2024).

To address this gap, this study proposes an IoT-based waste management web dashboard designed to support operational monitoring and managerial decision-making. The system integrates real-time data collected from waste containers into a centralized web platform that provides visual analytics, performance indicators, and actionable insights for business users. By focusing on information usability and managerial relevance, this research highlights how digital waste management systems can move beyond technical functionality and contribute to business value creation.

This study contributes to the literature by demonstrating how an IoT-enabled web dashboard can serve as a strategic information system that enhances operational efficiency, supports sustainability initiatives, and strengthens decision-making processes in business organizations. The findings are expected to provide practical implications for managers seeking to leverage digital technologies in waste management, as well as theoretical insights for future research on IoT-driven value creation in digital business environments (Mukhsin et al., 2023).

LITERATURE REVIEW

Resource-Based View (RBV)

The Resource-Based View posits that organizations achieve sustainable competitive advantage (Rahman et al., 2025) by effectively utilizing valuable, rare, inimitable, and non-substitutable (VRIN) resources (Barney, 1991). In this context, digital systems that integrate IoT data with managerial information platforms can be considered strategic resources when they enhance organizational capabilities.

An IoT-based waste management web dashboard functions as an intangible organizational resource by transforming raw operational data into actionable insights (Jiyanto et al., 2025). When embedded into daily operations, the system supports process optimization, cost efficiency, and improved managerial control. The ability to leverage real-time waste data for decision-making strengthens internal capabilities, allowing organizations to manage resources more efficiently and generate business value. Thus, RBV explains how digital waste management systems can contribute to competitive advantage through improved operational capabilities.

Information Systems Success Theory

Information Systems Success Theory emphasizes that the value of an information system is determined by its system quality, information quality, usage, and impact on individual and organizational performance. According to this theory, the success of a digital system is not measured solely by its technical functionality but by its ability to support decision-making and improve performance outcomes.

Within this study, the web dashboard serves as a critical interface that enhances information quality by providing accurate, timely, and relevant waste management data. High-quality information presented through intuitive visualizations enables managers to monitor performance, identify inefficiencies, and make informed decisions. Consequently, the dashboard's effectiveness contributes to improved operational performance and reinforces the role of information systems as drivers of business value.

Digital Transformation Theory

Digital Transformation Theory explains how organizations integrate digital technologies into business processes to fundamentally change how value is created and delivered (Verhoef et al., 2021). Rather than focusing

on technology adoption alone, this theory highlights the transformation of workflows, decision-making structures, and organizational culture (Junaedi, Renaldo, Yovita, et al., 2024).

The implementation of an IoT-based waste management web dashboard represents a shift from manual, reactive waste management practices to a data-driven and proactive management approach (Junaedi et al., 2025). By enabling real-time monitoring and analytics, the system supports process integration and managerial responsiveness. This transformation aligns waste management operations with broader organizational strategies related to efficiency (Chandra et al., 2024), sustainability, and digital business development.

Sustainability and Business Value Perspective

From a sustainability-oriented business perspective, waste management is increasingly linked to corporate responsibility and long-term value creation (Almasyhari et al., 2025). Digital systems that improve waste monitoring and control support environmentally responsible practices while simultaneously delivering economic benefits. The integration of IoT and web-based dashboards enables organizations to align operational efficiency with sustainability goals, reinforcing the strategic role of digital technologies in sustainable business models.

Waste Management as a Business and Operational Challenge

Waste management has increasingly become a strategic concern for business organizations due to rising operational costs, regulatory pressures, and growing stakeholder expectations regarding environmental responsibility (Almasyhari et al., 2025). Traditionally, waste management has been treated as a supporting operational activity focused on compliance and disposal efficiency. However, recent studies suggest that inefficient waste handling can negatively affect operational performance, resource utilization, and corporate reputation, thereby influencing overall business performance.

From a managerial perspective, waste management inefficiencies often stem from limited visibility into waste generation patterns, collection schedules, and operational performance. Manual monitoring and periodic reporting methods are unable to provide timely information for decision-making, resulting in reactive rather than proactive management. As businesses pursue operational excellence and sustainability simultaneously, waste management systems are increasingly expected to deliver measurable value beyond environmental compliance.

Internet of Things (IoT) in Business Operations

The Internet of Things (IoT) has emerged as a key enabler of digital transformation in business operations by allowing organizations to collect real-time data from physical assets (Westergren et al., 2024). In operational contexts, IoT technologies have been widely applied to asset tracking, inventory control, predictive maintenance, and logistics optimization. These applications demonstrate IoT's potential to improve efficiency, reduce costs, and enhance decision-making accuracy.

Despite these advantages, the business value of IoT is not derived solely from data collection. Prior literature emphasizes that IoT-generated data must be integrated into organizational information systems to support managerial analysis and decision-making. Without effective data processing and visualization mechanisms, IoT implementations risk becoming technology-driven initiatives with limited strategic impact. This highlights the importance of information systems that translate IoT data into actionable managerial insights.

Web Dashboards as Managerial Information Systems

Web-based dashboards are widely recognized as effective tools for presenting complex data in a concise and visually accessible format (Perdue et al., 2025). In management and business information systems literature, dashboards are viewed as instruments that enhance information quality, improve monitoring capabilities, and support performance management. By integrating multiple data sources, dashboards enable managers to track key performance indicators (KPIs) in real time and respond quickly to operational deviations.

In the context of waste management, dashboards can provide continuous visibility into waste volume, collection frequency, and operational efficiency. This real-time monitoring capability supports better coordination between operational units and management levels. Prior studies indicate that dashboards contribute to improved decision-making by reducing information asymmetry and enhancing managerial control. However, research on dashboard-based waste management systems has largely focused on technical design rather than their contribution to business value creation.

Business Value Creation through Digital Systems

Business value creation from digital technologies has been a central theme in information systems and digital business research (Renaldo, Fransisca, et al., 2025). Value is often conceptualized in terms of cost reduction, process efficiency, improved decision-making, and strategic flexibility. Digital systems that support

data-driven decision-making enable organizations to optimize resource allocation and enhance operational performance.

In waste management, digital systems can create value by reducing unnecessary collection activities, optimizing operational schedules, and improving accountability. Moreover, waste-related data can support sustainability reporting and contribute to corporate environmental, social, and governance (ESG) initiatives. Despite these potential benefits, existing literature reveals a gap in empirical and design-oriented studies that explicitly link IoT-based waste management systems to business value outcomes.

Research Gap and Conceptual Positioning

Although prior studies have examined IoT applications in environmental and waste management contexts, most emphasize technological performance, sensor accuracy, and system architecture. Limited attention has been given to how IoT-enabled systems function as managerial tools that support decision-making and value creation. Furthermore, the integration of IoT data into web-based dashboards tailored for business users remains underexplored in the business and management literature.

This study positions the IoT-based waste management web dashboard as a managerial information system rather than a purely technical solution. By focusing on real-time monitoring, data visualization, and decision support, the system is conceptualized as a tool for creating business value through improved operational efficiency and managerial effectiveness. This perspective addresses an important gap by linking digital waste management systems with value creation in business organizations.

METHODOLOGY

Research Design

This study adopts a Design Science Research (DSR) methodology to develop and evaluate an IoT-based waste management web dashboard aimed at creating business value (Sekaran & Bougie, 2016). DSR is suitable for this research because it focuses on the design, development, and evaluation of information system artifacts that address real-world organizational problems. In the context of digital business research, DSR allows for the integration of technological solutions with managerial objectives, particularly operational efficiency and decision support. The research design follows a structured DSR framework consisting of problem identification, system development, demonstration, and evaluation. This approach ensures that the proposed system is both practically relevant and theoretically grounded in business and information systems literature.

System Development

The proposed system integrates IoT-enabled waste monitoring devices with a centralized web-based dashboard. Waste volume data are collected in real time from IoT sensors installed in waste containers and transmitted to a cloud-based database. The web dashboard is designed to visualize operational data through interactive charts, performance indicators, and summary reports. From a business perspective, the dashboard emphasizes information usability rather than technical complexity. Key features include real-time waste level monitoring, historical data analysis, and performance visualization to support operational planning and managerial decision-making. The system architecture is designed to be scalable and adaptable for organizational use across different operational contexts.

Data Collection

Data used in this study consist of operational waste monitoring data collected through the IoT system over a defined observation period. The data include waste volume levels, collection frequency, and system usage logs. To assess business value creation, additional qualitative data are collected through structured interviews and questionnaires administered to managers and operational staff who interact with the dashboard. The combination of system-generated data and user feedback enables a comprehensive evaluation of both operational performance and managerial perceptions of system usefulness.

System Evaluation

System evaluation is conducted using both quantitative and qualitative approaches. Quantitative evaluation focuses on changes in operational performance indicators, such as collection efficiency, frequency optimization, and resource utilization before and after system implementation. Qualitative evaluation examines user perceptions related to information quality, decision support effectiveness, and managerial control.

Evaluation criteria are derived from Information Systems Success Theory, including system quality, information quality, and perceived usefulness. This evaluation approach ensures that the system's contribution to business value is assessed beyond technical performance.

Data Analysis

Quantitative data are analyzed using descriptive and comparative analysis to identify improvements in operational efficiency following system implementation. Qualitative data from interviews and questionnaires are analyzed using thematic analysis to identify recurring patterns related to decision-making, efficiency, and value creation. The integration of quantitative and qualitative findings provides a holistic understanding of how the IoT-based web dashboard supports business value creation in waste management operations.

Ethical Considerations

All participants involved in interviews and questionnaires are informed about the purpose of the study, and their responses are treated confidentially. Organizational data are anonymized to ensure that no sensitive business information is disclosed. The research adheres to ethical standards for academic research in business and management studies.

RESULTS AND DISCUSSION

System Implementation Results

The IoT-based waste management web dashboard was successfully implemented as an integrated managerial information system. The system enabled real-time monitoring of waste volume, historical data visualization, and performance tracking through a centralized web interface accessible to managers and operational staff. The dashboard transformed fragmented and manual waste monitoring practices into a structured, data-driven process. From an operational standpoint, the system provided continuous visibility into waste generation patterns and collection activities. Managers reported improved clarity regarding waste volume trends and operational bottlenecks, enabling more proactive planning. These results indicate that the dashboard functioned effectively as an information integration tool, consistent with the objectives of Design Science Research.

Operational Efficiency and Business Performance

Quantitative analysis of operational indicators revealed noticeable improvements following the implementation of the dashboard. Waste collection activities became more efficient, with reduced unnecessary collection frequency and improved allocation of operational resources. The availability of real-time data allowed organizations to align collection schedules with actual waste conditions rather than fixed routines. These findings demonstrate that digital waste management systems can directly contribute to cost efficiency and operational optimization. In line with the Resource-Based View (RBV), the dashboard enhanced organizational capabilities by enabling better utilization of internal resources, thereby supporting business value creation. The system functioned as a strategic asset that strengthened operational control and efficiency.

Decision-Making and Managerial Control

Qualitative findings from interviews and user feedback indicate that the web dashboard significantly improved managerial decision-making. Managers reported that real-time visualizations and performance indicators supported faster and more informed decisions related to waste collection planning and operational adjustments (Chandra et al., 2018). The dashboard reduced information asymmetry between operational staff and management by providing a shared and transparent information platform. These results support Information Systems Success Theory, which emphasizes information quality and perceived usefulness as key determinants of system success. The dashboard's ability to present accurate, timely, and relevant information enhanced its perceived value among users, reinforcing its role as a managerial decision support system rather than a purely technical tool.

Business Value Creation through Digital Waste Management

The findings indicate that business value created by the IoT-based web dashboard extends beyond operational efficiency. Improved waste monitoring supported better accountability and performance evaluation, contributing to more structured management practices. Additionally, the availability of historical data enabled organizations to identify long-term trends and evaluate the effectiveness of waste management strategies.

From a digital transformation perspective, the system facilitated a shift from reactive to proactive waste management. This transformation aligns with Digital Transformation Theory, which emphasizes process

integration and data-driven decision-making as key mechanisms for value creation. The dashboard enabled waste management to be integrated into broader business strategies related to efficiency and sustainability.

Discussion of Key Findings

Overall, the results confirm that the IoT-based waste management web dashboard creates business value by enhancing operational efficiency, improving decision-making quality, and supporting digital transformation in business operations. The findings align with RBV by positioning the system as a valuable organizational resource, with Information Systems Success Theory by demonstrating the importance of information quality, and with Digital Transformation Theory by illustrating process-level changes enabled by digital technologies.

This study addresses a gap in existing literature by shifting the focus from technical design to value creation and managerial relevance. The findings suggest that organizations can maximize returns from IoT investments by prioritizing information usability and integration into decision-making processes.

CONCLUSION

Conclusion

This study demonstrates that an IoT-based waste management web dashboard can function as a strategic managerial information system that creates business value beyond technical automation. By integrating real-time waste monitoring data into a centralized web platform, the system enhances operational efficiency, supports data-driven decision-making, and strengthens managerial control. The findings indicate that digital waste management systems contribute directly to cost efficiency, resource optimization, and improved operational planning.

From a theoretical perspective, the results support the Resource-Based View by positioning the dashboard as an intangible organizational resource that enhances operational capabilities. In line with Information Systems Success Theory, the system's effectiveness is driven by high information quality and perceived usefulness among managers. Furthermore, the study confirms the relevance of Digital Transformation Theory by illustrating how data-driven waste management practices enable proactive operational management and support sustainability-oriented business strategies.

Overall, this research highlights that the business value of IoT technologies is realized not through data collection alone but through effective integration into managerial decision-making processes. The proposed web dashboard provides a practical and scalable solution for organizations seeking to leverage digital technologies in waste management operations.

Implications

The implementation of the dashboard also supported sustainability-oriented business practices by improving waste control and reducing inefficiencies. Although environmental performance was not the primary measurement focus, managers perceived the system as a tool that supports sustainability reporting and compliance. This perception reinforces the role of digital systems in aligning operational performance with sustainability objectives.

These results contribute to the business and management literature by demonstrating that IoT-enabled systems can generate tangible business value when designed as managerial information systems. Unlike prior studies that emphasize technical performance, this research highlights the strategic and managerial implications of digital waste management solutions.

Limitations

Despite its contributions, this study has several limitations. First, the system evaluation was conducted within a limited organizational context, which may restrict the generalizability of the findings to other industries or organizational scales. Second, the measurement of business value primarily focused on operational efficiency and managerial perceptions, while financial performance indicators were not comprehensively examined. Third, the study did not incorporate advanced analytical features such as predictive analytics or artificial intelligence, which may further enhance decision-making capabilities. Additionally, user feedback was collected over a relatively short observation period, limiting the assessment of long-term system impacts and sustainability outcomes.

Recommendations

Based on the findings, several practical recommendations can be proposed. Organizations implementing IoT-based waste management systems should prioritize the integration of real-time data into user-friendly dashboards that support managerial decision-making rather than focusing solely on technical infrastructure.

Managers are encouraged to incorporate waste monitoring data into routine performance evaluations and operational planning to maximize system value.

Furthermore, organizations should align digital waste management initiatives with broader sustainability and digital transformation strategies. Training programs for managerial and operational staff are also recommended to ensure effective system utilization and to enhance data-driven decision-making capabilities.

Future Research

Future research could extend this study by examining the financial and strategic impacts of IoT-based waste management systems across multiple organizations and industries. Comparative studies involving different organizational contexts would enhance the generalizability of findings. Future studies may also integrate advanced analytics, such as machine learning or predictive modeling, to explore their role in further optimizing waste management operations.

Additionally, longitudinal research is recommended to assess the long-term business and sustainability impacts of digital waste management systems. Future studies could also explore the integration of IoT-based waste management dashboards with enterprise resource planning (ERP) or sustainability reporting systems to provide a more comprehensive view of digital value creation in business operations.

REFERENCES

Almasyhari, A. K., Rachmadani, W. S., Sari, Y. P., & Basrowi. (2025). Strategic decision-making: Linking corporate choices, social responsibility, and environmental accounting in waste management. *Social Sciences and Humanities Open*, *11*. https://doi.org/10.1016/j.ssaho.2025.101404

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, *17*(1), 99–120.

Fransisca, L., Renaldo, N., Chandra, T., Augustine, Y., & Musa, S. (2025). Digital Innovation Capability and Customer Value Co-Creation on New Product Performance with Digital Transformation Maturity as a Moderating Variable in Trading Companies in Indonesia. *Luxury: Landscape of Business Administration*, *3*(1), 1–15. https://doi.org/https://doi.org/10.61230/luxury.v3i1.103

Hariyani, D., Hariyani, P., Mishra, S., & Sharma, M. K. (2025). A literature review on waste management treatment and control techniques. In *Sustainable Futures* (Vol. 9). Elsevier Ltd. https://doi.org/10.1016/j.sftr.2025.100728

Hossain, M. A., Ferdous, N., & Ferdous, E. (2024). Crisis-driven disruptions in global waste management: Impacts, challenges and policy responses amid COVID-19, Russia-Ukraine war, climate change, and colossal food waste. In *Environmental Challenges* (Vol. 14). Elsevier B.V. https://doi.org/10.1016/j.envc.2023.100807

Jahrizal, J., Dalil, M., Amri, R., Yovita, I., Koto, J., Faruq, U., Junaedi, A. T., Tendra, G., Renaldo, N., & Mammadova, U. (2025). Enhancing Goat and Sheep Farm Management with IoT-Enabled Weighing Devices. *Seroja Journal of Empowerment and Community Service*, *1*(1), 23–27. https://doi.org/10.61230/seroja.v1i1.119

Jiyanto, Saputra, D., Chandra, D. A., Junaedi, A. T., Renaldo, N., Susanti, W., Nora Marlim, Y., Santosa, F., & Muslim. (2025). Peternakan Cerdas Tangguh Bencana Berbasis IoT sebagai Solusi Ketahanan Pangan dan Pencegahan Stunting. *GERVASI: Jurnal Pengabdian Kepada Masyarakat*, *09*(03), 2320–2334.

Junaedi, A. T., Renaldo, N., Panjaitan, H. P., Veronica, K., Putra, R., Tendra, G., Jahrizal, J., Yovita, I., Musa, S., Cecilia, C., & Miskon, S. (2025). Development of Digital Business Literacy and Culture for Generation Z in Southeast Asia on International Webinar Future Ready, Digital Business Model & IOT Driven Ventures in Southeast Asia. *Seroja Journal of Empowerment and Community Service*, *1*(1), 1–7. https://doi.org/https://doi.org/10.61230/seroja.v1i1.105

Junaedi, A. T., Renaldo, N., Susanti, W., Tendra, G., Jahrizal, J., Dalil, M., Veronica, K., Suhardjo, S., Musa, S., & Cecilia, C. (2024). Innovative Business Models and IoT-Driven Solutions for Smart Goat Farming Management. *Interconnection: An Economic Perspective Horizon*, *2*(2), 79–89. https://doi.org/10.61230/interconnection.v2i2.116

Leknoi, U., Painmanakul, P., Chawaloesphonsiya, N., Wimolsakcharoen, W., Samritthinanta, C., & Yiengthaisong, A. (2024). Building sustainable community: Insight from successful waste management initiative. *Resources, Conservation and Recycling Advances*, *24*. https://doi.org/10.1016/j.rcradv.2024.200238

Mukhsin, M., Renaldo, N., Junaedi, A. T., Veronica, K., & Cecilia, C. (2023). Innovative Approaches to Cloud-Based Accounting Information Systems: Integrating AI, Blockchain, and IoT. *Proceeding of International Conference on Business Management and Accounting (ICOBIMA)*, *2*(1), 288–294. https://doi.org/https://doi.org/10.35145/icobima.v2i1.4375

Perdue, L. A., Trevino, S. D., Grant, S., Lin, J. S., & Tanner-Smith, E. E. (2025). Creating Interactive Data Dashboards for Evidence Syntheses. *Cochrane Evidence Synthesis and Methods*, *3*(4). https://doi.org/10.1002/cesm.70035

Rahman, S., Fadrul, Suyono, Setyawan, O., Junaedi, A. T., & Renaldo, N. (2025). Digital competitive advantages of MSMEs and the antecedents factor (digital creativity and digital culture). *Journal of Open Innovation: Technology, Market, and Complexity*, *11*(3). https://doi.org/10.1016/j.joitmc.2025.100585

Renaldo, N. (2024). Integration of Internet of Things and Digital Accounting Systems for Marine Resources Monitoring. *Interconnection: An Economic Perspective Horizon*, *2*(1), 50–59. https://doi.org/https://doi.org/10.61230/interconnection.v2i1.91

Renaldo, N., Elvina, V., Chandra, T., Tavip Junaedi, A., Veronica, K., & Jahrizal, J. (2025). *Big Data Technology Moderates the Effect of Financial Fundamentals on Firm Value in Indonesia's Technology Sector*. https://doi.org/10.23887/jia.v10i1.95

Renaldo, N., & Fransisca, L. (2024). Digital Water Accounting for Value Creation, Transforming Water Data into Strategic Sustainability Assets. *Proceeding of International Conference on Business Management and Accounting (ICOBIMA)*, *3*(1), 119–126. https://doi.org/10.35145/icobima.v3i1.5082

Renaldo, N., Fransisca, L., Junaedi, A. T., Augustine, Y., Suhardjo, S., & Andi, A. (2025). *Value Creation in Digital Accounting*. www.penerbitlitnus.co.id

Renaldo, N., Fransisca, L., Junaedi, A. T., Tanjung, A. R., Chandra, T., Suharti, S., Andi, A., Suhardjo, S., Augustine, Y., & Musa, S. (2024). Real-time Value Creation Metrics in Manufacturing Through Blue Innovation and IoT-Based Accounting. *International Conference on Business Management and Accounting*, *3*(1), 108–118. https://doi.org/10.35145/icobima.v3i1.4903

Renaldo, N., Junaedi, A. T., Suhardjo, S., Veronica, K., Augustine, Y., Musa, S., & Cecilia, C. (2024). Blue Innovation, Value Creation, and Decision-making on Digital Performance and Sustainability. *Journal of Applied Business and Technology*, *5*(3), 202–219. https://doi.org/https://doi.org/10.35145/jabt.v5i3.189

Renaldo, N., & Murwaningsari, E. (2023). Does Gender Diversity Moderate the Determinant of Future Firm Value? *Review of Economics and Finance*, *21*, 680–689. https://doi.org/https://doi.org/10.55365/1923.x2023.21.72

Renaldo, N., Suhardjo, Putri, I. Y., Sevendy, T., & Juventia, J. (2021). Penilaian Harga Saham Berbasis Web pada Perusahaan Sektor Aneka Industri Tahun 2020. *Kurs: Jurnal Akuntansi, Kewirausahaan Dan Bisnis*, *6*(1), 91–102. http://www.ejournal.pelitaindonesia.ac.id/ojs32/index.php/KURS/article/view/1309/711

Sekaran, U., & Bougie, R. (2016). *Research Methods for Business*. John Wiley & Sons Ltd. www.wileypluslearningspace.com

Susanti, W., Renaldo, N., Chandra, T., Tendra, G., Veronica, K., Ramadhani, R., Ramdani, R., Panjaitan, H. P., Junaedi, A. T., & Purnama, I. (2024). *Development of IoT-Based Accounting System for Automatic Environmental Data Monitoring*. *2*(2), 99–105. https://doi.org/10.61230/interconnection.v2i2.122

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, *122*(889–901), 1–13. https://doi.org/10.1016/j.jbusres.2019.09.022

Westergren, U. H., Mähler, V., & Jadaan, T. (2024). Enabling digital transformation: Organizational implementation of the internet of things. *Information and Management*, *61*(6). https://doi.org/10.1016/j.im.2024.103996