Journal of Advanced Multidisciplinary Studies
JAMS
+62 877-6589-8367
admin@jurnal-jams.or.id
https://jurnal-jams.or.id
Vol. 1, No. 3, October 2025 | Page. 1 - 10

DEVELOPING A DIGITAL SALES APPLICATION AS A STRATEGY TO OPTIMIZE THE FINANCIAL PERFORMANCE OF MSMEs

Safitri Akbari[1], Suwandi[2], Turini[3], Amroni[4], Ni Wayan Fitriana Ayu Lestari[5]
[1,4] Accounting Study Program, Faculty of Economics and Business,
Catur Insan Cendekia University
[2,3] Accounting Computerization Study Program, Faculty of Information Technology,
Catur Insan Cendekia University
[5] Management Study Program, Faculty of Economics and Business,
Catur Insan Cendekia University
Email: safitri.akbari@cic.ac.id, suwandi@cic.ac.id,
turini@cic.ac.id, amroni@cic.ac.id, niwayan.lestari@cic.ac.id.

Keywords:

MSMEs,
Digital Sales Applications,
BUMN House,
Financial Performance,
Waterfall Method.

Abstract

MSMEs fostered by Rumah BUMN (State-Owned Enterprises House) in Cirebon City have significant potential to drive local economic growth. However, the low adoption of digital technology in the sales process remains a major obstacle, impacting the effectiveness of business financial management. This study aims to develop a digital sales application that can assist MSMEs in recording transactions in real time, managing stock, and automatically generating simple financial reports, as a strategy to optimize financial performance. The method used in developing this application is the Waterfall Model, which consists of the stages of needs analysis, system design, implementation, testing, and maintenance. System requirements data were obtained through observations and interviews with MSMEs fostered by Rumah BUMN. The results of this development indicate that the designed application can simplify the sales process and financial recording in an integrated manner. System trials were conducted on several MSMEs and demonstrated increased operational efficiency and understanding of business cash flow. In conclusion, this application is a relevant digital solution to support the financial transformation of MSMEs towards more structured, transparent, and accountable management.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) have long been a key driver of the Indonesian economy, including in Cirebon (Martinravi & Krishnasamy, 2025). Their presence is expected to absorb labor and strengthen the local, people-based economy. However, the challenges they face remain complex, particularly in financial management and marketing, which are not yet digitized (Ranta et al., 2021). The gap between the potential of MSMEs and their ability to manage their businesses in a modern way is a fundamental issue that requires systematic addressing.

One of the main obstacles often faced by assisted MSMEs is the limited manual financial record-keeping and sales systems (Rosi et al., 2025). As a result, many business owners lack accurate transaction records, struggle to monitor cash flow, and struggle with business evaluation and planning. This makes it difficult to objectively measure MSME financial performance and hinders their long-term business growth (Tarigan & Girsang, 2025).

Rumah BUMN (*(State-Owned Enterprises House)*, as a platform for fostering MSMEs, plays a strategic role in driving digital transformation through training, mentoring, and technology facilitation (Kusesvara & Astuti, 2023). However, there is currently no sales application system specifically designed and implemented for MSMEs fostered by Rumah BUMN in Cirebon City. However, a digital application tailored to the characteristics of local MSMEs could be the right solution for promoting efficiency and transparency in business finances (Atmojo, 2024). Based on this, developing a digital sales application is a strategic step that is not only technical but also impacts the overall empowerment of MSMEs. This application is designed to assist MSMEs in recording daily transactions, managing inventory, and generating sales reports automatically (Purnomo et al., 2024). This way, MSMEs don't need a strong accounting background to continue managing their businesses professionally.

This research uses the Waterfall method, which consists of five main stages: requirements analysis, system design, implementation, testing, and maintenance (irlansyah Putra et al., 2024). This method was chosen because it provides a clear and systematic work structure in software development, making it suitable for projects with pre-defined requirements and specifications (Fachri et al., 2024). This approach also simplifies the documentation and evaluation process at each stage of application development.

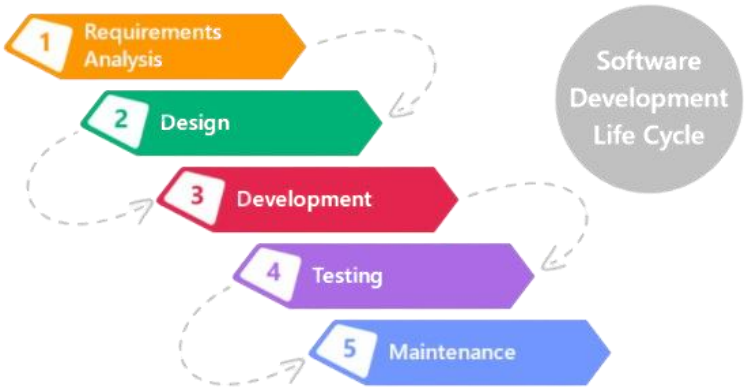

Figure 1. Waterfall Method

The urgency of this research lies in the urgent need for digital solutions that can address the real challenges faced by the MSMEs under their guidance, particularly in the post-pandemic context and in the context of increasing digital competitiveness (Syahrial et al., 2024). With this application, it is hoped that MSMEs will be better prepared for the digital economy era, improve financial accountability, and expand their markets through data-driven strategies (Kristiyanti et al., 2024). This aligns with the vision of an inclusive and sustainable national economic transformation.

More broadly, this research also contributes to the development of a technology-based MSME development model that can be replicated at other regional SOE Houses in Indonesia (Azzahra et al., 2025). The results not only produce an application but also a deeper understanding of MSME digital needs and implementation strategies. Therefore, this research is relevant, impactful, and addresses real needs on the ground.

LITERATURE REVIEW

1. Micro, Small, and Medium Enterprises (MSMEs)

MSMEs play a strategic role in national economic development, particularly in job creation, income distribution, and strengthening the people's economy. According to Law No. 20 of 2008 concerning MSMEs, microenterprises are productive businesses owned by individuals and/or individual business entities that meet certain criteria regarding assets and turnover. The main challenges for MSMEs in the digital era are limited access to technology, capital, and effective financial recording systems (Alawiah et al., 2024).

2. Digital Transformation and Digital Sales

Digital transformation refers to the process of integrating digital technology into all aspects of a business, fundamentally changing how organizations operate and deliver value to customers (Peng & Tao, 2022). One form of this transformation is the implementation of digital sales applications, such as e-commerce, marketplaces, and app-based point-of-sale systems. The use of digital sales applications has been proven to improve operational efficiency, expand market reach, and facilitate real-time transaction reporting.

3. MSMEs Financial Performance

The financial performance of MSMEs can be measured by several indicators, such as revenue, net profit, cash flow, and cost efficiency. According to (Hanggraeni & Sinamo, 2021), improving financial performance depends not only on increased sales but also on a digitally integrated recording and reporting system. Using a sales application that can record transactions accurately and in real time will facilitate business actors in conducting financial analysis and making more informed decisions.

4. The Role of Rumah BUMN in Empowering MSMEs

Rumah BUMN is an initiative of the Ministry of State-Owned Enterprises to support MSME empowerment through training, mentoring, and digitalization facilities. In Cirebon City, Rumah BUMN serves as a coaching center and facilitator for MSMEs to develop their business capacity, including utilizing digital technology

for sales. The synergy between application development and mentoring from Rumah BUMN is expected to create an inclusive digital ecosystem for MSMEs.

5. Application Development Method (Software Development Life Cycle - SDLC)

Digital application development generally follows the SDLC method, which includes the stages of requirements analysis, system design, implementation, testing, and maintenance. Agile or prototyping methods are often used for MSME applications because they are more flexible and respond quickly to user feedback. This approach is important to ensure that the developed application aligns with the characteristics and capabilities of the MSMEs being supported.

RESEARCH METHOD

1. Research Design

This research uses a research and development (R&D) approach using the Waterfall software development method. This approach aims to produce a digital sales application that can improve the efficiency and financial performance of MSMEs. The Waterfall model was chosen because it offers systematic stages, from needs analysis to application maintenance.

2. Research Subject/Object

The research object is a digital sales application developed for MSMEs. The research subjects are MSMEs fostered by the Cirebon City BUMN House.

3. System Development Method: Waterfall

This research uses the Waterfall method as an approach to developing a digital sales application for MSMEs under the guidance of Rumah BUMN (State-Owned Enterprises House) in Cirebon City. Waterfall is a sequential and systematic software development model, where each development stage is carried out incrementally and cannot proceed to the next stage until the previous stage is completed. This method was chosen because application development projects are structured, with requirements clearly defined at the beginning of the process. The stages of the Waterfall method applied in this research are as follows:

(a.) Requirements Analysis

This stage involves data collection to identify the functional and non-functional requirements of the system. Techniques used include interviews with assisted MSMEs and Rumah BUMN (State-Owned Enterprises), business process observations, and documentation studies. The outcome of this stage is the requirements specifications for the system to be developed.

(b.) System Design

After the system requirements are formulated, this stage focuses on designing the overall system structure, including the user interface (UI), database, process flowchart, and system architecture. This design aims to provide a technical overview before the implementation phase.

(c.) Implementation/Coding

In this stage, coding is performed based on the system design that has been created. The programming languages and technologies used are tailored to the needs of a web- or mobile-based digital application that is easy for MSMEs to use. The result of this stage is a digital sales application that is ready for testing.

(d.) Testing (System Testing)

After the application is developed, the next stage is testing. Testing is conducted to ensure that all application features operate according to user requirements. Testing methods used include black-box testing, which evaluates system functionality without viewing the program code.

(e.) Maintenance (System Maintenance)

After the application is implemented, its performance is monitored and repairs are made if bugs or additional user needs are identified. This phase is ongoing to ensure the system remains relevant and adaptive to the needs of MSMEs.

RESULTS AND DISCUSSION

Program View

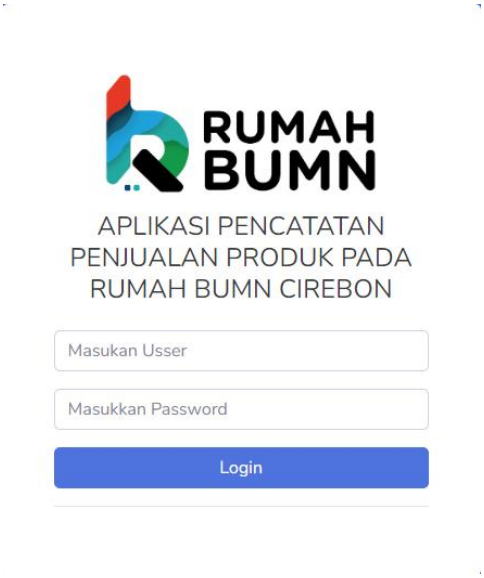

Figure 2. Login Form View

This form (Figure 2) consists of username, password, login button. Here's the explanation:

(a.) **Username** is filled in with the name registered in the database.
(b.) **Password** is a combination of the username and password that will be used to log in to the program.
(c.) **The Login** button is used after the username and password have been entered according to the database. The main menu will appear in the relevant section.

Main menu of the cashier

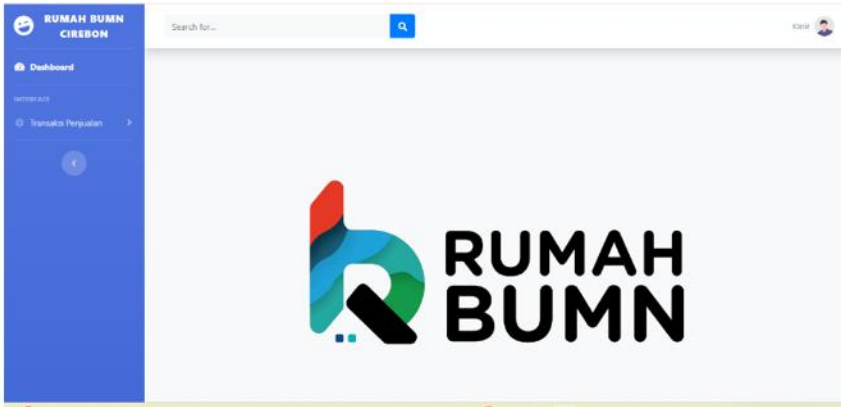

Figure 3. Cashier Main Menu Dashboard Display

Input Sales Transactions

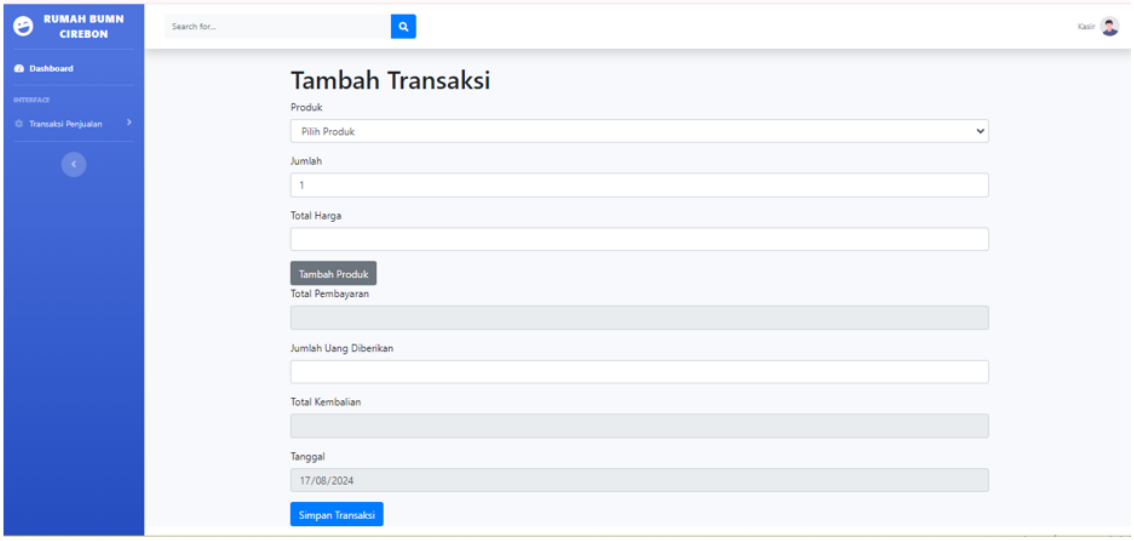

Figure 3. Input Sales Transactions

The Transaction Data Input Form for Recording Product Sales at the Cirebon BUMN House is used to store Sales Transaction Data (Figure 3.)

Sales Recording Transaction Results Form

This form serves as a data input tool for every sales transaction conducted by MSMEs, both cash and non-cash. It replaces manual recording systems and reduces the risk of data loss.

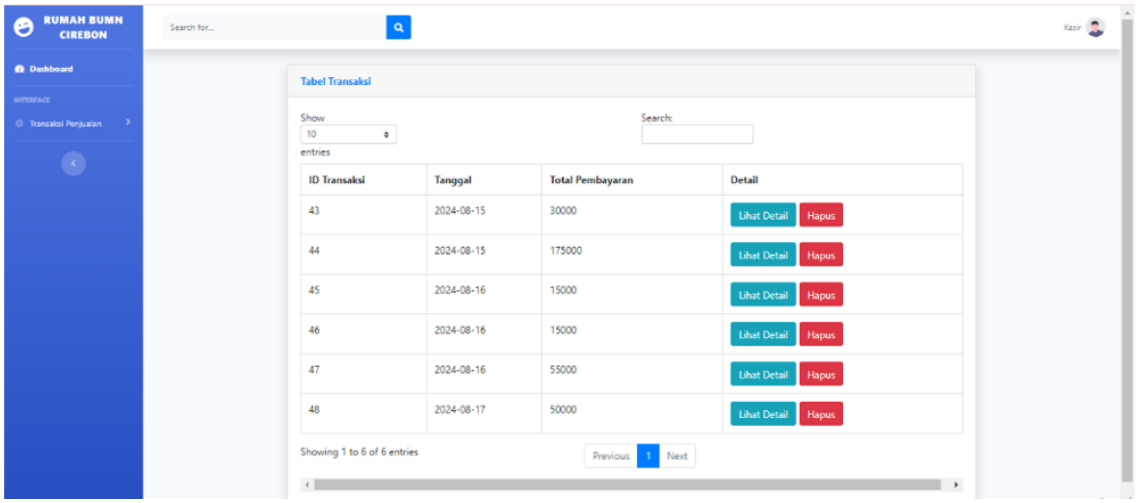

Figure 4. Sales Recording Transaction Results Form

With a standard and systematic form format, sales recording becomes more accurate, consistent, and standardized, making it easier for MSMEs to monitor daily sales activities. The data collected from this form forms the basis of periodic sales reports, which can then be used to analyze sales trends, best-selling products, peak sales times, and overall business performance.

Sales Transaction Details

This feature allows users (MSMEs) to directly record every sales transaction, both cash and non-cash. This helps prevent data loss due to manual recording or forgetting to record. By recording details such as the number of products sold, unit price, discounts and total payments, MSMEs can monitor cash flow on a daily, weekly, and monthly basis. This is crucial for managing business liquidity.

Figure 5. Sales Transaction Details

Sales Graph

Graphs are used to display MSME sales trends or patterns before and after using digital sales applications. This visualization allows readers to easily understand whether there has been a periodic increase or decrease in sales performance. Through sales graphs, researchers can connect sales data with financial aspects such as cash flow, profit margins, and cost efficiency. This is crucial for understanding how digital sales strategies impact the overall financial performance of MSMEs.

Figure 6. Sales Graph

Figure 6. explains that graphs can also reveal fluctuating patterns in sales, such as increases in certain months or decreases due to external factors. This information is important for planning future marketing or production strategies.

CONCLUSION

This study aims to address the low sales efficiency and effectiveness of MSMEs fostered by Rumah BUMN (State-Owned Enterprises House) in Cirebon City due to the limited use of digital technology. Through needs analysis and direct observation of the fostered MSMEs, it was found that most businesses have not yet implemented an integrated digital system in their operational activities, particularly in sales and financial recording. This has implications for business owners in monitoring financial performance in real time and developing data-driven business strategies.

The implementation of this digital sales application has had a direct positive impact on the management of fostered MSMEs. Business owners can regularly evaluate financial performance, identify best-selling products, and minimize manual recording errors. Furthermore, sales digitization also promotes information transparency and facilitates reporting to supervisors such as Rumah BUMN. This strategy is a concrete step in building an accountable, technology-driven business culture.

Overall, this study concludes that the development and implementation of a digital sales application can be an effective strategy for optimizing the financial performance of MSMEs fostered by Rumah BUMN (State-Owned Enterprises House)

in Cirebon City. The technology, designed to meet user needs, has been proven to improve efficiency, transparency, and accuracy in business management. It is hoped that this application model can be replicated and further developed to support the digital transformation of MSMEs in other regions, thereby sustainably strengthening the competitiveness of the microeconomic sector.

BIBLIOGRAPHY

Alawiah, E. T., Setyorini, D., & Apriyani, H. (2024). Implementation Of Artificial Intelligence Based On Natural Language Processing To Enhance MSME Sales. *IJISTECH (International Journal Of Information System And Technology)*, *8*(3), 186–193.

Atmojo, M. E. (2024). Implementasi Program Digitalisasi UMKM Melalui Rumah BUMN Yogyakarta. *WEDANA: Jurnal Kajian Pemerintahan, Politik Dan Birokrasi*, *10*(1), 12–23.

Azzahra, Z. F., Fa'rifah, R. Y., & Lathifah, S. N. (2025). Empowering Msmes With Data-Driven Insights: Mobile Sales Dashboard Application For Msmes. *Jurnal Nasional Teknologi Dan Sistem Informasi*, *11*(1), 1–8.

Fachri, B., Bazikho, D. D. S., & Susilo, F. S. (2024). Perancangan Sistem Informasi Penjualan UMKM Menggunakan Metode Waterfall Berbasis Wordpress. *Jurnal Komputer Teknologi Informasi Sistem Informasi (JUKTISI)*, *3*(2), 723–730.

Hanggraeni, D., & Sinamo, T. (2021). Quality Of Entrepreneurship And Micro-, Small-And Medium-Sized Enterprises'(Msmes) Financial Performance In Indonesia. *The Journal Of Asian Finance, Economics And Business*, *8*(4), 897–907.

Irlansyah Putra, M., Silalahi, K. R., Sinabutar, P., & Harmaja, O. J. (2024). Analysis And Design Of Web-Based MSME Cashier Application Using The Waterfall Model. *Jurnal Sistem Informasi Dan Ilmu Komputer*, *8*(1), 309–317.

Kristiyanti, D. A., Alexandra, Y., Situmorang, R., Athira, R. F., & William, J. A. (2024). Digitalization Of Village Based On Information Technology Through Developing Bumdes Msmes Website And Logo. *Jurnal Inovasi Hasil Pengabdian Masyarakat (JIPEMAS)*, *7*(1), 196–207.

Kusesvara, N. A., & Astuti, R. F. (2023). Peran Rumah Bumn Dalam Pengembangan Usaha Umkm Di Kota Samarinda. *Educational Studies: Conference Series*, *3*(2), 283–292.

Martinravi, C. P., & Krishnasamy, K. (2025). Unleashing The Potential Of Msmes In India: A Strategic Analysis. *Journal Of The International Council For Small Business*, *6*(1), 123–143.

Peng, Y., & Tao, C. (2022). Can Digital Transformation Promote Enterprise Performance? —From The Perspective Of Public Policy And Innovation. *Journal Of Innovation And Knowledge*, *7*(3), 100198. Https://Doi.Org/10.1016/J.Jik.2022.100198

Purnomo, S., Nurmalitasari, N., & Nurchim, N. (2024). Digital Transformation Of Msmes In Indonesia: A Systematic Literature Review. *Journal Of Management And Digital Business*, *4*(2), 301–312.

Ranta, V., Aarikka-Stenroos, L., & Väisänen, J. M. (2021). Digital Technologies Catalyzing Business Model Innovation For Circular Economy—Multiple Case Study. *Resources, Conservation And Recycling*, *164*(August 2020), 105155.

Https://Doi.Org/10.1016/J.Resconrec.2020.105155
Rosi, M., Utami, R. W., & Neviyani, N. (2025). Transformation Of Msmes Through Product Innovation; Analysis Of Local Economic Empowerment. *Ecobisma (Jurnal Ekonomi, Bisnis Dan MANAJEMEN)*, *12*(2), 317–327.
Syahrial, R., Sari, J., Nasri, J., Trilaksono, A. R., & Hiswara, I. (2024). Implementation Of Android Apps In MSME Digital Transactions. *Jurnal Info Sains: Informatika Dan Sains*, *14*(01), 539–550.
Tarigan, W. J., & Girsang, S. E. E. (2025). Impact Of Future Financing Packages On Profitable Growth Of Msmes. *Jurnal Ekuilnomi*, *7*(1), 120–128.