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PRODUCT DESIGN AND DEVELOPMENT OF THE INCASHBACK APPLICATION USING AN OPERATIONS MANAGEMENT APPROACH

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Abstract: The rapid growth of digital technology has encouraged businesses to develop innovative digital platforms that can improve operational efficiency and provide additional value to users. This study aims to analyze the design and development process of the Incashback application using an operations management approach. The research adopts a qualitative case study method, with primary data collected through semi-structured interviews with the business owner of Incashback. The findings show that the idea for developing the application emerged from observing the increasing number of digital transactions in everyday activities such as online shopping, bill payments, and other digital services. The development process involved collaboration between managerial and technical teams to determine the key features of the platform, particularly the cashback distribution mechanism. However, the development stage also revealed several operational challenges, including system automation and operational efficiency. The study concludes that successful digital product development requires the integration of market opportunity analysis, iterative feature development, and effective operations management to ensure that the application can deliver value to users and operate sustainably in a competitive digital environment.
Keywords: Application Development, Digital Platform, Operations Management, Product Design

INTRODUCTION

The rapid development of digital technology has significantly transformed the way businesses design, develop, and deliver products and services to consumers. In recent years, the increasing adoption of mobile applications has become a key driver of digital transformation across various industries, particularly in Indonesia's growing digital economy. Mobile-based platforms allow businesses to streamline operational activities, expand market reach, and improve service efficiency through integrated digital systems. As a result, many startups and digital enterprises are focusing on developing innovative applications that provide added value to users while maintaining operational effectiveness. Research shows that digital transformation through mobile applications can enhance operational efficiency, business model innovation, and market accessibility for organizations, especially in emerging digital ecosystems such as Indonesia (Manap & Rijal, 2024).

Alongside technological advancement, the development of digital platforms has also contributed to the rapid growth of digital entrepreneurship and startup ecosystems in Indonesia. The increasing number of digital startups demonstrates how technological innovation can create new business opportunities and transform traditional business models into more efficient digital- based services. However, the success of a digital product is not solely determined by technological capability but also by how well the product is designed and developed to meet user needs while maintaining operational sustainability. Studies highlight that digital platforms can improve business competitiveness by enabling more efficient operational processes and facilitating innovation in products and services offered to users (Amali et al., 2025).

In this context, the process of product design and development becomes a crucial stage in ensuring that a digital application can function effectively and deliver value to

both users and business partners. A structured approach to product development allows companies to identify market opportunities, design relevant features, and integrate operational systems that support long- term sustainability. Furthermore, effective operations management is required to coordinate technological resources, human capital, and operational processes to ensure that the product can operate consistently after its launch. Digital transformation initiatives in Indonesia also highlight the importance of aligning technological innovation with operational strategies to support sustainable business growth (Purnomo et al., 2024). Based on this background, this study aims to analyze the product design and development of the Incashback application using an operations management approach. The research explores how the idea of the application emerged, how its core features were designed, and how operational considerations influence the development process. By examining these aspects, the study provides insights into how digital applications can be strategically designed to address market needs while maintaining operational efficiency in a competitive digital environment.

RESEARCH METHODS

This study adopts a qualitative research approach using a case study method to explore the product design and development process of the Incashback application from an operations management perspective. A qualitative case study is considered appropriate because it allows researchers to examine complex business phenomena in depth and within their real-world context. Through this approach, the research focuses on understanding how digital products are developed, how operational decisions influence the design process, and how startup founders interpret market opportunities and operational challenges during product development. Previous studies highlight that qualitative case studies are effective for investigating startup strategies and digital business development because they enable researchers to obtain rich and contextual insights that cannot be captured through quantitative methods alone (Padli et al., 2024).

Primary data in this study were collected through semi-structured interviews with the business owner of Incashback, focusing on several stages of product development such as idea generation, feasibility analysis, feature design, testing processes, and product launch strategies. The interview results were then analyzed using a descriptive qualitative analysis, where the responses were interpreted and categorized based on key themes related to operations management and digital product development. Secondary data were also obtained from relevant academic literature and recent studies on digital startups and entrepreneurship in Indonesia to support the analysis and provide theoretical context. Qualitative research emphasizes understanding meaning and interpretation rather than numerical measurement, making it suitable for analyzing innovation processes in digital startups and the strategic decisions involved in developing new digital applications (Komalasari et al., 2022).

RESULTS AND DISCUSSION

Market Opportunity and Idea Generation of the Incashback Application

The initial idea for developing the Incashback application emerged from the observation of rapidly increasing digital transaction activities among consumers. Based on the interview with the business owner, many daily activities that were previously conducted offline have shifted to online platforms, including online shopping, ticket

booking, monthly bill payments, and the purchase of internet data packages. This shift indicates that digital transactions have become a routine part of consumer behavior, creating a consistent and growing market opportunity for digital platforms that facilitate these activities. From this observation, the founder recognized that the frequency of online transactions occurs almost every day, which signals a stable demand for services that can provide additional benefits to users during their digital spending activities.

The concept of Incashback was also influenced by the presence of existing applications that offer cashback for transactions. However, according to the interview results, the cashback systems used by several existing platforms were perceived as not fully optimized and not sufficiently beneficial for users. This gap became the starting point for the development of Incashback. The founder aimed to create a new application that improves the cashback distribution mechanism so that users can gain more value from their transactions. Therefore, the main idea behind Incashback was not merely to replicate an existing business model but to refine and improve a system that was considered inefficient from the user perspective. From a product development perspective, this idea generation stage demonstrates how market observation and problem identification can become the foundation for designing a new digital product. The emergence of Incashback reflects an effort to respond to real consumer behavior in the digital economy while addressing the limitations found in existing cashback platforms.

Product Feature Development and Operational Challenges

The development of product features in the Incashback application was carried out through an internal decision-making process involving both the company's directors and the IT team. Based on the interview results, the determination of key features did not occur instantly but was discussed regularly through weekly internal meetings. These discussions focused on identifying which functions were most relevant to support the main value of the platform, particularly the mechanism for distributing income generated from users' digital transactions. The development process aimed to design a system that could provide a more beneficial cashback experience compared to existing platforms. This process reflects a typical product development pattern in digital startups, where product features are gradually refined through collaboration between business and technical teams to ensure that the application is able to operate effectively while still responding to market needs. In the broader context of digital startup development in Indonesia, the creation of innovative digital products often involves continuous iteration and internal coordination because startups operate in a dynamic environment with evolving technological and market conditions.

However, during the development stage, several operational challenges were identified. One of the main issues was related to the automation of the income distribution system within the application. According to the interview results, the system had not yet been fully automated, which meant that some operational processes still required manual intervention. This situation created limitations in the operational efficiency of the platform and influenced the need for adjustments in both system design and technical implementation. As a result, the development process also involved several design modifications to accommodate operational realities and technical constraints. Feedback obtained from application testing further revealed user concerns regarding interface appearance, withdrawal processing time, and the deposit mechanism for PPOB services.

These inputs indicated that improvements were still required to enhance system functionality and user experience. Challenges such as technological limitations, resource constraints, and system integration are common issues faced by digital startups during the

early stages of product development, particularly when attempting to scale digital services and ensure system stability.

Discussion

The findings presented in the results section highlight how the development of the Incashback application is strongly influenced by market observation and operational considerations during the product design process. The emergence of Incashback was initially driven by the rapid increase in digital transaction activities, which indicates a shift in consumer behavior toward online platforms. This observation aligns with the concept of opportunity-driven innovation in digital entrepreneurship, where startups identify gaps in existing systems and attempt to create improved solutions for users. In the case of Incashback, the founder recognized that although cashback platforms already existed, their distribution mechanisms were perceived as inefficient and less beneficial for users. This condition became the foundation for developing a platform that focuses on improving the cashback distribution system and providing additional value for users. Previous studies also emphasize that evaluating consumer value and potential user satisfaction before product launch is an important step in developing new products because it helps ensure that the product addresses real user needs and market expectations (Istijanto et al., 2023). Therefore, the idea generation process observed in Incashback reflects a typical pattern in digital product innovation, where new applications emerge from attempts to improve existing service systems rather than creating entirely new markets.

Furthermore, the development of Incashback's product features demonstrates the importance of collaboration between managerial and technical teams in shaping digital products. The weekly internal meetings between the directors and the IT team indicate that the product design process is iterative and adaptive, allowing the organization to continuously adjust features according to operational realities and technological constraints. This process reflects the principle of operations management in digital startups, where operational feasibility and system capability play a significant role in determining the final design of a product. In practice, the development of the application also revealed operational challenges, particularly regarding the automation of income distribution within the platform. The presence of manual processes indicates that the system is still evolving and requires further integration to achieve full operational efficiency. Similar findings are reported in recent studies on Indonesian digital startups, which note that technological limitations and system integration issues are common challenges during the early stages of digital product development (Nasution, 2026).

User feedback obtained from application testing also provides important insights for improving the platform. Issues related to interface appearance, withdrawal processing time, and the deposit system for PPOB services highlight the need to balance technical performance with user experience in digital product design. Research on digital platform development in Indonesia also suggests that successful digital applications must continuously adapt their system design based on user feedback and operational learning processes to ensure long-term sustainability (Meilin et al., 2025). Overall, the case of Incashback illustrates that product design and development in digital startups is not a linear process but rather a continuous cycle of market observation, feature refinement, and operational adjustment to ensure that the application can deliver value while maintaining system reliability.

CONCLUSION

This study analyzes the design and development process of the Incashback application using an operations management approach. The findings indicate that the initial idea for the application emerged from observing the increasing trend of digital transactions in everyday consumer activities, such as online shopping, ticket booking, and digital payments. This situation created a clear market opportunity for a digital platform that could provide additional value to users through a more optimized cashback distribution system. As discussed in the results, the founder identified limitations in existing cashback platforms and attempted to develop a new application that improves the efficiency and benefits of the cashback mechanism for users.

The development process of Incashback also highlights the importance of collaboration between managerial and technical teams in designing digital products. The determination of application features through regular discussions between directors and the IT team demonstrates that product design in digital startups often occurs through iterative and adaptive processes. However, the development stage also revealed several operational challenges, particularly related to system automation and operational efficiency. Some processes still required manual handling, which influenced system performance and required further improvements in the application design.

REFERENCES

Amali, M. S., Fatmawati, S., Rosdiana, D. A., & Kristianti, L. S. (2025). Peran platform digital terhadap pengembangan UMKM di Indonesia. *In Prosiding Seminar Nasional Manajemen* (Vol. 4, No. 1, pp. 338-341). https://openjournal.unpam.ac.id/index.php/PSM/article/view/44993/21919.

Istijanto, Arifin, Y., & Nurhayati. (2023). Examining customer satisfaction and purchase intention toward a new product before its launch: Cookies enriched with spirulina. Cogent Business & Management, 10(3), 2257346. https://doi.org/10.1080/23311975.2023.2257346.

Komalasari, R., Nurhayati, N., & Mustafa, C. (2022). Insider/outsider issues: Reflections on qualitative research. *Qualitative Report,* 27(3), 744-751. https://www.storre.stir.ac.uk/handle/1893/33838.

Manap, A., & Rijal, S. (2024). Digital Transformation through Mobile Applications: Innovative Strategies to Enhance MSME Management and Growth in Indonesia. *Technology and Society Perspectives (TACIT)*, 2(3), 285-291. https://doi.org/10.61100/tacit.v2i3.235.

Meilin, M., Emantonio, N., Magdalena, R. S., & Wulandari, A. (2025). Analisis Pertumbuhan Platform Bisnis Digital di Indonesia. *Jurnal Ilmiah Raflesia Akuntansi*, 11(1), 210-220. https://doi.org/10.53494/jira.v11i1.846.

Nasution, M. A. (2026). Tren pertumbuhan dan kinerja bisnis digital di Indonesia: Kajian literatur dan analisis konseptual 2020–2024. *Jurnal Manajemen*, 1(1), 26-35. https://jurnal.univefarina.ac.id/index.php/JM/article/view/163.

Padli, A., Khairunnisa, N., Khanza, A., Andayani, D., & Halim, E. (2024). Strategi Pengembangan Startup Teknologi di Indonesia Melalui IT Business Incubation: Technology Startup Development Strategy in Indonesia Through IT Business

Incubation. *Jurnal MENTARI: Manajemen, Pendidikan Dan Teknologi Informasi*, 3(1), 73-80. https://journal.pandawan.id/mentari/article/view/621.

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. https://doi.org/10.53088/jmdb.v4i2.1121.