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Strategic Prioritization of IT Projects to Enhance Banking

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ABSTRACT

Purpose – This study aims to develop a strategy for prioritizing information technology (IT) development projects that align with the operational objectives and resource limitations of Bank BRI.
Methodology/approach – The research adopts a mixed-methods approach. The Analytical Hierarchy Process (AHP) is employed to determine the priority weight of each IT project based on five key criteria: customer acquisition, service quality, regulatory compliance, product innovation, and operational efficiency. Focus Group Discussions (FGDs) are conducted with key stakeholders to validate findings and identify implementation barriers. Root cause analysis using Why-Why and Fishbone Diagrams is performed to uncover underlying issues in project delays and prioritization gaps.
Findings – It was found that projects contributing to increased transactions and customer base receive the highest priority. However, FGD findings reveal that implementation often diverges from analytical priority due to resource constraints, unclear scope, and lack of filtering mechanisms. A set of strategies is proposed to improve project filtering, resource allocation, and inter-unit coordination.
Novelty/value – This research introduces an integrated prioritization framework combining AHP with stakeholder validation and root cause analysis, offering a practical approach to IT project governance in banking institutions. The model enhances decision-making beyond weight-based ranking by incorporating real-world constraints and institutional readiness.

INTRODUCTION

In the era of digital transformation, banking institutions are increasingly dependent on information technology (IT) to improve operational efficiency, service quality, regulatory compliance, and customer engagement. Large-scale banks like Bank Rakyat Indonesia (BRI) must continuously invest in IT development projects to remain competitive and meet rapidly evolving market demands. However, the number of IT project proposals often exceeds the bank's available resources, making it essential to establish a systematic and strategic project prioritization process.

Previous studies and practices in IT project prioritization have widely used methods such as cost-benefit analysis, scoring models, and portfolio matrices. Among these, the Analytical Hierarchy Process (AHP) has gained prominence due to its ability to incorporate multi-criteria decision making. AHP has proven effective in evaluating projects based on various strategic dimensions, including business value,

risk, and urgency. Nevertheless, many AHP-based prioritization frameworks lack input from organizational stakeholders and often overlook the practical barriers that arise during project implementation.

To address these gaps, some researchers have integrated qualitative methods such as Focus Group Discussions (FGD) to capture stakeholder perspectives and organizational constraints. Root cause analysis methods like Why-Why and Fishbone Diagrams have also been employed to identify underlying issues affecting project outcomes. However, these approaches are rarely applied in a unified framework that connects project prioritization, stakeholder validation, and implementation analysis.

This paper proposes an integrated prioritization model that combines AHP with FGD, Why-Why Analysis, and Fishbone Diagrams. Unlike prior studies that focus solely on analytical rankings, this research highlights the importance of incorporating organizational dynamics and root cause analysis to ensure the prioritization strategy is both theoretically sound and practically feasible.

The objective of this study is to formulate a strategic and implementable prioritization model for IT development projects at Bank BRI by combining AHP with stakeholder-based validation and root cause analysis methods.

LITERATURE REVIEW

Analytical Hierarchy Process (AHP)

Effective project prioritization in information technology (IT) has long been a critical area of research, particularly in environments with constrained resources and high strategic expectations such as the banking sector. Several studies have proposed multi-criteria decision-making methods, with the Analytical Hierarchy Process (AHP) being one of the most widely used due to its structured and quantitative nature. AHP facilitates comparative evaluation of project alternatives by breaking down complex decisions into a hierarchy of simpler criteria as seen in Figure 1.
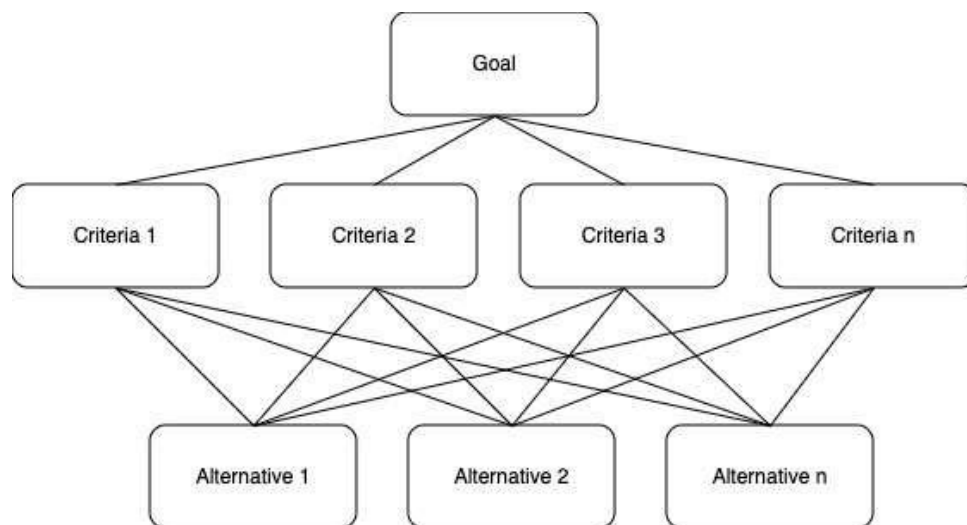

Figure 1. A Three Level Hierarchy

This method has been successfully applied to prioritize IT initiatives in sectors such as healthcare, education, and financial services. However, in many cases, the models remain theoretical and are not fully validated in practice, especially when organizational dynamics and constraints are considered.

Focus Group Discussions (FGD)

To address this limitation, some researchers have incorporated Focus Group Discussions (FGD) as a qualitative complement to AHP. FGDs enable participatory decision-making by involving stakeholders directly responsible for project execution and oversight. This approach ensures that prioritization outcomes reflect real-world constraints, including limited resources, cross-unit dependencies, and organizational readiness. Despite its effectiveness, the integration of FGDs with AHP is not yet a standard practice in IT project governance literature.

Why-Why Analysis and Fishbone Diagrams

In terms of identifying and addressing implementation challenges, Why-Why Analysis and Fishbone Diagrams have proven useful for diagnosing the root causes of project delays, failure to meet objectives, or misalignment with strategic goals. These tools help organizations uncover systemic issues such as unclear project scopes, inadequate resource planning, or miscommunication among units. While these methods are commonly applied in quality improvement and process management, their application in strategic IT project prioritization remains limited.

This study contributes to existing knowledge by proposing an integrated framework that combines AHP for analytical ranking, FGD for stakeholder validation, and root cause analysis (Why-Why and Fishbone) for implementation feasibility. This hybrid approach addresses the shortcomings of previous models by incorporating not only quantitative evaluation but also qualitative insight and organizational context. To the best of the authors' knowledge, few studies have implemented this holistic method within the scope of IT project management in Indonesian banking institutions.

Furthermore, the research aligns with the scope and objectives of contemporary IT management journals by offering a practical, validated, and replicable strategy model for organizations seeking to enhance digital transformation through more effective IT project prioritization. The novelty of this paper lies in its systemic integration of multiple tools and its application to a real-world case in one of Indonesia's largest state-owned banks.

METHOD

This study employs a descriptive and qualitative research design with a case study approach focused on Bank Rakyat Indonesia (BRI). The aim is to develop a prioritization strategy for IT development projects that aligns with business goals, optimizes resource use, and addresses implementation constraints. The population includes all strategic IT development projects listed in the annual work program of Bank BRI. Using purposive sampling, seven IT projects were selected based on their strategic importance, business impact, and alignment with the bank's digital transformation objectives.

Primary data were collected through structured interviews and Focus Group Discussions (FGDs) involving key stakeholders from IT, business, and project management departments. These discussions explored the feasibility, challenges, and strategic value of each project. Secondary data were gathered from internal documents, strategic plans, project portfolios, and performance reports of Bank BRI.

The research used a combination of quantitative and qualitative analysis methods:

- Analytical Hierarchy Process (AHP): Used to determine the priority weight of each project based on five criteria: customer and transaction growth, service quality improvement, regulatory compliance, product and service innovation, and operational efficiency (Figure 2).
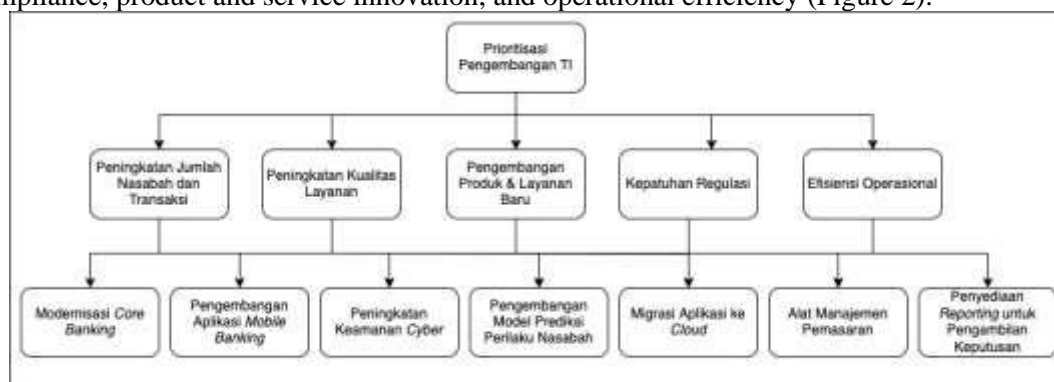

Figure 2. AHP Model

- Focus Group Discussion (FGD): Applied to validate the AHP results and uncover additional strategic and practical considerations in prioritization.

- Fishbone Diagram: Employed to visually map and categorize the causes of project challenges across multiple dimensions such as manpower, method, environment, and governance (Figure 3).
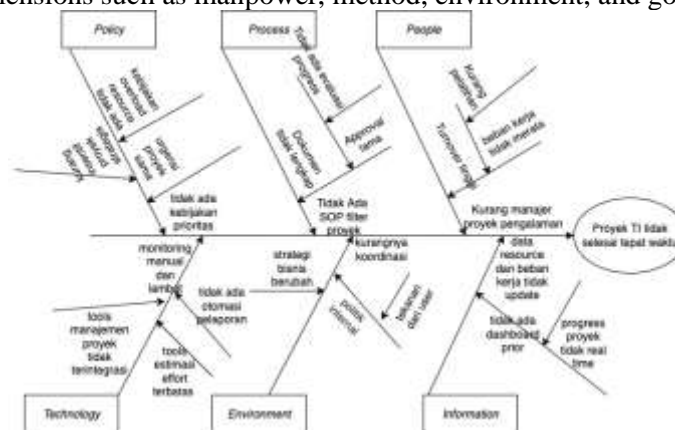

Figure 3. Fishbone Diagram

- Why-Why Analysis: Utilized to identify the root causes of delays and misalignment in project implementation (figure 4).
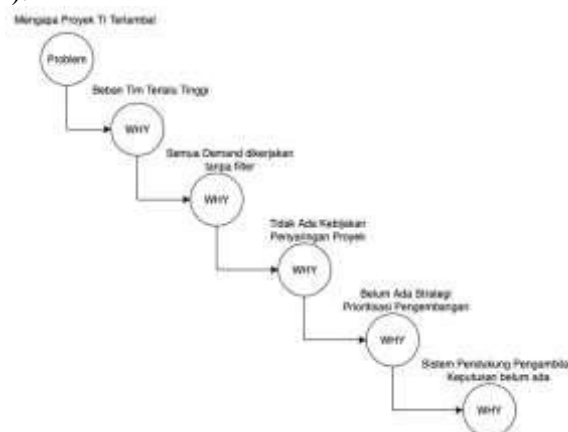

Figure 4. Why Why Analysis

The analysis began with scoring each project using AHP. The resulting ranking was then brought to an FGD session involving relevant stakeholders to evaluate the practical feasibility of each prioritized project. Based on issues identified during the FGD, Why-Why Analysis and Fishbone Diagram techniques were applied to diagnose the root causes of project execution problems. Finally, improvement strategies were proposed to refine the prioritization process and enhance project delivery performance.

RESULT AND DISCUSSION

1. AHP-Based Project Prioritization Results

The AHP analysis revealed that the highest priority was assigned to IT development projects that contribute to increasing customer numbers and transaction volume. This aligns with the strategic focus of Bank BRI on expanding its digital customer base. The second and third priorities were given to projects improving service quality and ensuring regulatory compliance, respectively. Projects focusing on product/service innovation and operational efficiency ranked lower due to limited immediate impact on strategic business outcomes.

These findings are consistent with previous research (e.g., Saaty, 2008) which emphasizes that AHP allows decision-makers to prioritize alternatives based on strategic value and organizational goals. However, the ranking alone is insufficient for practical implementation, as it does not consider execution feasibility.

2. Stakeholder Validation via FGD

The FGD, involving representatives from IT, PMO, and business units, provided critical insights that challenged the initial AHP rankings. Stakeholders noted that some high-priority projects, although strategically aligned, could not be executed in the short term due to limited resources, overlapping scopes, or unclear requirements. For example, projects ranked second and third by AHP were deemed difficult to implement without additional developer capacity or governance adjustments.

This supports the argument by Harvinder & Kaur (2021) that strategic alignment alone cannot determine project readiness; execution constraints must also be evaluated. The FGD confirmed that a holistic approach—balancing prioritization with implementation feasibility—is necessary.

3. Why-Why Analysis and Fishbone Diagram

To understand the systemic causes of implementation issues, a root cause analysis was conducted. The Why-Why Analysis revealed that project delays were often caused by inadequate filtering mechanisms at the early proposal stage. Supporting factors included poor communication between units, unclear role assignments, and the absence of workload-based developer allocation.

The Fishbone Diagram categorized root causes across six dimensions: People, Method, Environment, Measurement, Material, and Machine (technology). For instance, under "People," unclear role definitions and lack of resource mapping were identified. Under "Method," the absence of a unified prioritization SOP (standard operating procedure) emerged as a key factor. This finding is in line with quality management literature, where Fishbone Diagrams are used to systematically uncover interrelated causes behind performance issues (Agustinus et al., 2022).

4. Proposed Improvement Strategies

Based on the AHP, FGD, and root cause analysis, a series of strategies were formulated as seen in Table 1:

- Introduce early-stage project filtering using predefined strategic criteria and technical readiness.
- Develop a resource mapping system to align project plans with actual developer capacity.
- Establish an integrated governance model involving IT, business, and PMO to evaluate prioritization holistically.

These strategies contribute to the literature by integrating multi-method decision analysis with organizational diagnosis tools, filling the gap between prioritization theory and execution reality. The practical contribution lies in enabling large organizations like Bank BRI to align strategic IT initiatives with on-ground capabilities.

Table 1 as Matrix improvement strategy.

Main Problem	Root Cause	Solution Strategy
Projects Delayed	No demand filtering	IT Project Scoring and filtering policy
Developer Overload	All projects handled	Capacity planning based on priority
Tools monitoring not integrated	Monitoring system unavailable	Dashboard integrated with prioritization
Projects not aligned to business strategy	No formal prioritization strategy	Annual prioritization strategy formulation

CONCLUSION

This study concludes that a structured and practical approach is essential in prioritizing IT development projects, particularly in large banking institutions like Bank BRI. While the Analytical Hierarchy Process (AHP) effectively ranks projects based on strategic criteria such as customer growth, service quality, and regulatory compliance, the involvement of stakeholders through Focus Group Discussions (FGD) reveals that strategic priority alone is insufficient. Factors such as resource availability, project complexity, and scope overlap significantly affect the feasibility of implementation.

Root cause analysis using Why-Why and Fishbone Diagram further uncovers systemic issues that often lead to project delays, including the absence of a standardized project filtering mechanism and inadequate coordination between departments. These findings highlight the importance of integrating analytical tools with qualitative insights and organizational diagnostics.

The proposed prioritization strategy—combining AHP with FGD, Why-Why, and Fishbone—bridges the gap between strategic planning and operational execution. This hybrid model ensures that IT projects are not only aligned with business objectives but also realistically executable within existing constraints.

Suggestion:

Organizations are encouraged to adopt integrated prioritization frameworks that combine analytical and participatory approaches. Early-stage filtering, capacity-based planning, and collaborative governance are crucial to enhancing IT project success and supporting long-term digital transformation goals.

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