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An Analysis on the Effectiveness of Hybrid Project Methods in Project Completion: A Case Study of Road Construction Project in Lusaka

Janet Chembe[1], Doctor Kelvin Chibomba[2], and Melvin Kabubi[3]

[1,2,3]Information and Communications University - ICU

***Abstract*—** The construction industry faces numerous challenges, including delays, cost overruns, and quality issues. Traditional project management approaches often struggle to address these complexities. The emergence of hybrid project management methods has provided a response to the limitations of traditional project approaches especially in managing complex and dynamic projects such as road construction. This study aims to evaluate the effectiveness of hybrid project methods in completing road construction projects in Lusaka, Zambia, a region where infrastructure development is vital for economic growth and connectivity. Traditional methods often struggle with the flexibility needed to adapt to changing conditions, whereas hybrid methods integrate elements of both traditional and Agile approaches to leverage their strengths and mitigate their weaknesses. The primary objective is to assess common methods used in hybrid project management, determine their effectiveness, and examine the relationship between these methods and project performance. Methodologically, this research employs a case study design, focusing on a single road construction project in Lusaka. It employs a mixed-methods approach, integrating both qualitative and quantitative methods to provide a comprehensive understanding of the effectiveness of hybrid project methods in road construction projects. A purposive sampling technique ensures that participants have relevant knowledge and experience, enhancing the credibility of the findings. Data collection involves semi-structured interviews and field notes, with data analyzed through both quantitative and qualitative methods. Triangulation of data sources and involving multiple researchers in the analysis process will enhance the validity and reliability of the findings. This research contributes to the body of knowledge on hybrid project management, offering insights into its application in the African construction industry. The findings will inform project managers, policymakers, and stakeholders on effective project delivery strategies, ultimately enhancing infrastructure development in Zambia and beyond. The expected results are anticipated to reveal insights into how hybrid project methods improve adaptability, efficiency, and overall project performance in road construction. These findings will demonstrate the advantages of hybrid methods in managing project complexities; this research aims to contribute to the broader discourse on improving infrastructure project outcomes in developing countries, thereby supporting economic growth and development.

***Keywords*—** PM - Project Management, TPM - Traditional Project Management, APM - Agile Project Management, HPM - Hybrid Project Management.

I. INTRODUCTION

1.1 Background

Road construction projects play a crucial role in the socio-economic development of urban areas, facilitating transportation networks and enhancing connectivity. Effective project management methodologies are essential for ensuring the timely completion and success of such infrastructure projects.

This chapter provides the background information which highlights the historical background of the study, the statement of the problem, research questions, research aims and objectives, scope of study, Conceptual Framework, significance of the study, limitations and the Operational Definition of Concepts.

According to Kerzner (2003). Hybrid project methods have emerged as a response to the limitations of traditional project management approaches, particularly in the context of complex and dynamic projects such as road construction. Traditional methods like Waterfall often struggle to adapt to changes and uncertainties inherent in such projects. Conversely, Agile methodologies prioritize adaptability and iterative development but may lack the structure necessary for large-scale projects. In response to these challenges, hybrid project management methodologies integrate elements of both traditional and Agile approaches, aiming to capitalize on their respective strengths while mitigating weaknesses. Zailani, (2007). The Zambian government has identified infrastructure development as a key priority, aiming to enhance connectivity, facilitate

trade, and stimulate economic growth. However, like many developing countries, Zambia faces challenges related to project management efficiency, resource allocation, and timely project completion. Tucker. (2020). Adoption of innovative project management methodologies is becoming increasingly relevant. While traditional project management approaches have been utilized in the past, their limitations in addressing the complexities of road construction projects have become apparent. Factors such as changing environmental conditions, stakeholder dynamics, and budget constraints necessitate a more adaptive and responsive approach to project management. This study sought to assess the efficacy of hybrid project management techniques.

1.2 Statement of the problem

Despite the growing recognition of the limitations inherent in traditional project management methodologies in addressing the complexities of road construction projects, the adoption and effective implementation of hybrid project methods remain underexplored within the context of Lusaka, Zambia Bwalya (2022), The Zambian government has identified infrastructure development, particularly in the transportation sector, as crucial for enhancing connectivity, facilitating trade, and driving economic growth. Camanho, (2013) opined that the existing project management practices have exhibited inefficiencies, leading to delays, cost overruns, and suboptimal project outcomes. Given the significance of road construction projects in driving economic development and alleviating poverty, there is an urgent need to assess the effectiveness of hybrid project methods in optimizing project completion within the specific socio-economic and environmental dynamics of Lusaka. While traditional project management approaches have been utilized in the past, they have proven inadequate in addressing the evolving challenges posed by road construction projects, including changing environmental conditions, stakeholder dynamics, and budget constraints. This research aims to address the gap by analyzing the effectiveness of hybrid project methods on project completion within the framework of the road construction project in Lusaka

1.3 Objectives

The general objective of this project is to assess the effectiveness of hybrid project methods in completing road construction projects in Lusaka. The specific objectives are to establish common methods in hybrid project management, to analyze the effectiveness of hybrid project management methods and to examine the relationship between hybrid methods and project performance.

1.4 Theoretical framework

In examining the effectiveness of hybrid project methods in the completion of a road construction project in Lusaka, Zambia, the Critical Success Factors (CSF) framework will serve as a pivotal tool. Firstly, it will guide the identification of key factors critical to project success. This includes comprehensive project planning, which underpins effective implementation by outlining clear objectives, schedules, and milestones aligned with project goals (Ahern, Leavy, & Byrne, 2014; Atkinson, 1999). The CSF framework will also facilitate an in-depth analysis of resource management, assessing how hybrid methods optimize resource allocation, budgeting, and personnel deployment to enhance efficiency and mitigate risks (Belassi & Tukel, 1996; Conforto et al., 2016). Moreover, it will enable a nuanced exploration of stakeholder engagement strategies facilitated by hybrid approaches, examining their role in fostering collaboration, managing expectations, and ensuring stakeholder satisfaction throughout the project lifecycle (Camilleri, 2011; Serrador & Pinto, 2015). By applying the CSF framework, this research aims to provide empirical insights into how hybrid project methods can effectively address the challenges specific to road construction projects in Lusaka, thereby contributing to both theoretical understanding and practical application in project management contexts.

1.5 Literature Review

The integration of hybrid project management methodologies, combining traditional and agile approaches, has become increasingly relevant in the context of road construction projects in Lusaka, Zambia. This literature review aims to explore the integration of these methodologies and their impact on project completion time, budget adherence, and quality outcomes. By examining existing research and case studies, this review seeks to provide insights into the effectiveness of hybrid project management in the construction industry.

Hybrid project management combines traditional and agile methodologies to leverage the strengths of both approaches, enabling more flexible and efficient project execution. This review explores common methods in hybrid project management, highlighting their applications and benefits.

One prevalent method in hybrid project management is the integration of the Waterfall and Agile methodologies. Waterfall provides a structured approach with clearly defined stages such as requirement gathering, design, development, testing, and deployment, which ensures comprehensive documentation and meticulous planning. Agile, on the other hand, emphasizes iterative development, flexibility, and customer collaboration. By combining these approaches, organizations can plan and document critical project phases using Waterfall while adopting Agile for development and testing, thus ensuring both structure and adaptability. This hybrid approach allows teams to maintain rigorous planning and control in initial phases, while benefiting from Agile's iterative improvements and responsiveness to change during execution (Serrador & Pinto, 2015).

Project management has increasingly become a core strategic competency in organizations worldwide, shaping how they deliver value, meet stakeholder expectations, and maintain competitive advantages. With industries such as information technology (IT) relying heavily on projects to innovate and grow, the importance of structured project management practices cannot be overstated.

2 RESEARCH METHODOLOGY

2.1 Research Design/Methods/Approach

The methodology encompasses the research design, target population, sampling design and size, data collection methods, data analysis techniques, triangulation, limitations of the study, and ethical considerations. Each aspect of the methodology is discussed in detail to provide clarity and transparency in the research process.

A case study strategy was chosen as the research design for this study due to its suitability for an in-depth exploration of the effectiveness of hybrid project methods in project completion within the specific context of a road construction project in Lusaka (Yin, 2018). The case study approach allows for a detailed examination of the intricacies, dynamics, and complexities involved in the implementation of hybrid project methods in a real-world setting (Baxter & Jack, 2008). By focusing on a single case, it enables a thorough analysis of the interactions between various factors and the outcomes of interest (Stake, 2006).

This research design aligns with the objectives of the study, which aims to evaluate the implementation of hybrid project methods and their impact on project completion in the context of road construction projects in Lusaka. A case study approach provides the flexibility to explore the dynamics of hybrid project management methodologies, including their integration with traditional and agile approaches, and their implications for project completion time, budget adherence, and quality outcomes (Creswell, 2013).

The target population for this study comprises individuals directly involved in the road construction project in Lusaka, including project managers, engineers, construction workers, and stakeholders. These individuals possess the necessary knowledge, expertise, and experience related to the implementation of hybrid project methods in the context of road construction projects. Their insights and perspectives are crucial for gaining a comprehensive understanding of the research topic. The sampling design for this study employs a purposive sampling technique to select a representative sample from the target population (Creswell, 2013). Purposive sampling ensures that participants have relevant knowledge and experience related to hybrid project methods in road construction projects, thereby enhancing the credibility and validity of the research findings (Bryman, 2016). The selection criteria include expertise in project management, experience in road construction projects, and involvement in the implementation of hybrid project methods.

Purposive sampling is particularly appropriate for this study as it allows the researcher to select participants who can provide valuable insights into the research topic (Bryman, 2016). Given the specific focus on hybrid project methods in road construction projects in Lusaka, participants with relevant expertise and experience are essential for generating meaningful data and drawing valid conclusions (Creswell, 2013). process of institutionalizing CBMS in all local government administrative units.

RESULTS

This chapter presents the results of the study and discusses these results obtained from the research survey. The results are based on the survey data from 50 respondents surveyed in Lusaka district.

The average scores of the dependent and independent variables were obtained for each construct by computing them into Stata. As such, Stata was used to analyze the data.

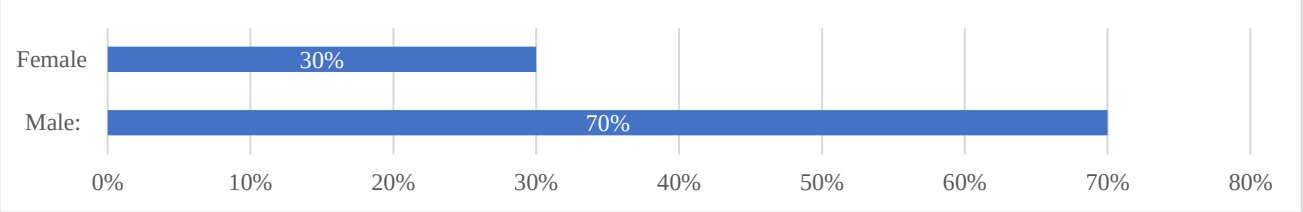

Figure 1. *What is your Gender*

The gender distribution in this study indicates that 70% of the respondents are male, while 30% are female. The lower representation of females may suggest the need for further inclusion and diversity initiatives within the sector

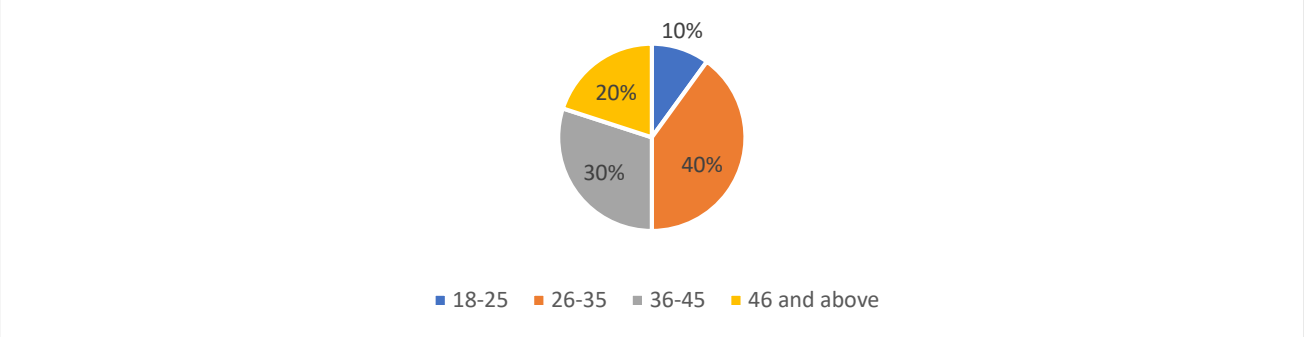

Figure 2. *How old are you*

The concentration of respondents in the 26-35 and 36-45 brackets suggests that most participants are in their mid-career stages, likely possessing significant work experience and familiarity with road construction projects and project management methods. The relatively smaller representation from the younger group (18-25) could indicate that fewer individuals at entry-level positions are involved in decision-making roles within the project, while the 46 and above group may offer more senior-level perspectives.

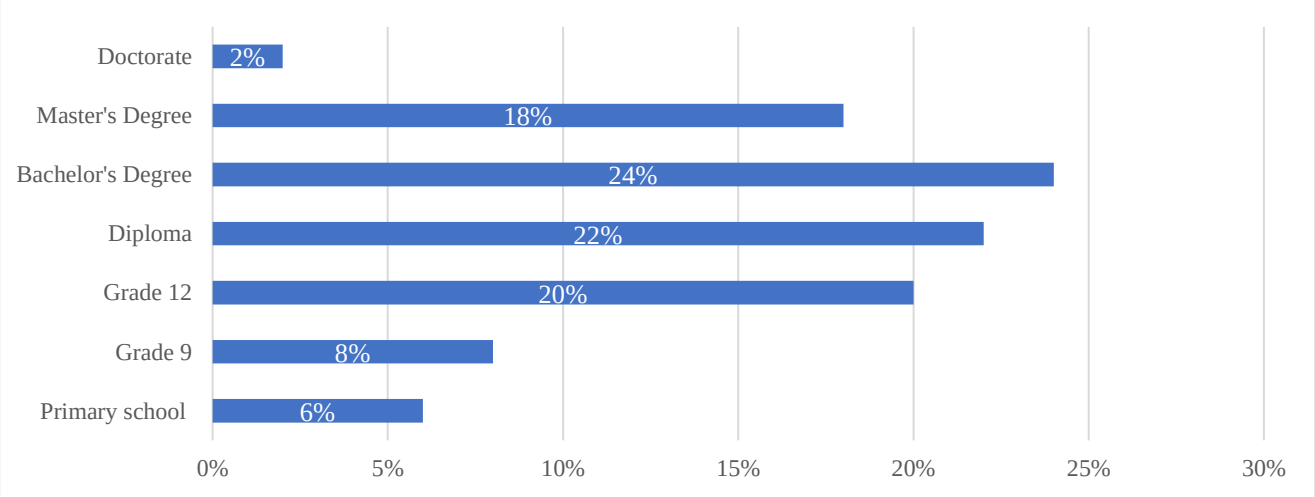

Figure 3. *what is your Educational Level?*

Respondents provided insights into their educational levels, with the following distribution: 6% reported having completed primary school, while 8% indicated their education reached the grade 9 level. A larger portion, 20%, reported achieving a grade 12 level, and 22% held a diploma. Those with a bachelor's degree constituted 24% of the respondents, showcasing a significant presence of individuals with higher education. Additionally, 18% had attained a master's degree, and 2% possessed a doctorate.

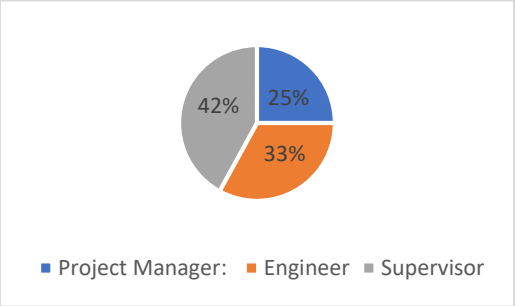

Figure 4. *What is your Role in the Project?*

The distribution of roles shows that the largest group of respondents are Supervisors (40%), followed by Engineers (30%), Project Managers (20%), and 10% in other roles. Supervisors, being the majority, Engineers, who make up 30%, are typically involved in the technical execution of the project, Project Managers, though representing 20% of the sample, are likely to provide strategic viewpoints on the effectiveness of hybrid methods in achieving project timelines, budgets, and overall performance. The 10% in other roles can offer unique perspectives depending on their specific responsibilities.

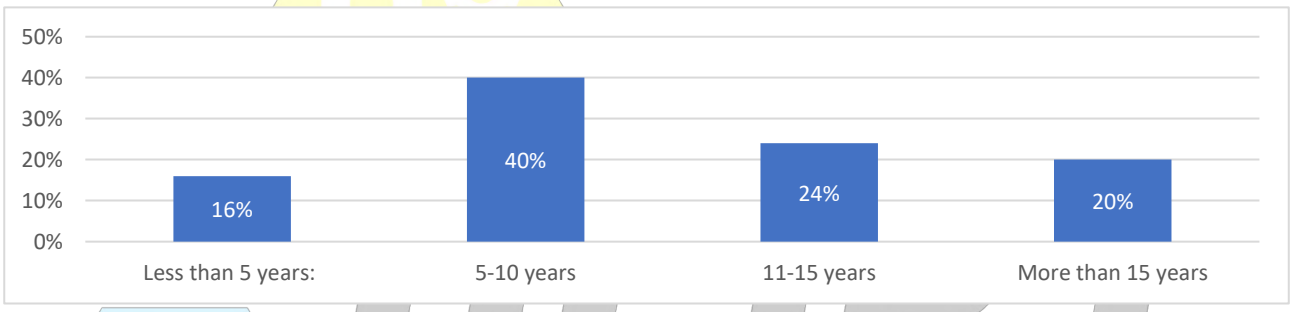

Figure 5. *Years of Experience in Project Management:*

The years of experience in project management among respondents show that 40% have 5-10 years of experience, making this the dominant group. This level of experience suggests that a significant portion of respondents are well-versed in project management practices and have had ample exposure to both traditional and hybrid methods. Their feedback will likely reflect a solid understanding of project dynamics, including challenges and efficiencies linked to hybrid project methods. Those with 11-15 years of experience (24%) and more than 15 years (20%) contribute a deeper, more seasoned perspective. Their experience might also highlight long-term performance trends and risk management strategies. On the other hand, 16% of respondents have less than 5 years of experience.

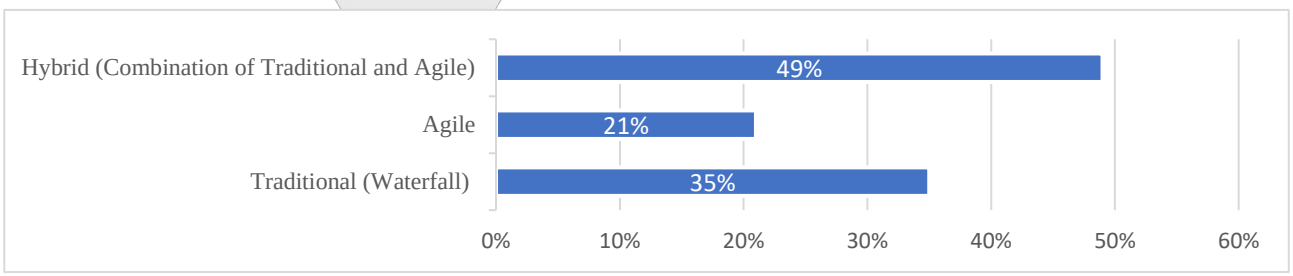

Figure 6. *Which project management approach do you most commonly use?*

The respondents indicated that 50% most used the hybrid project management approach, suggesting a preference for combining traditional and Agile methods in road construction projects. Additionally, 30% of the participants mentioned that they relied on the traditional Waterfall approach, indicating that some projects or aspects of construction still required a linear, phase-based methodology. Only 10% stated that they used Agile methods.

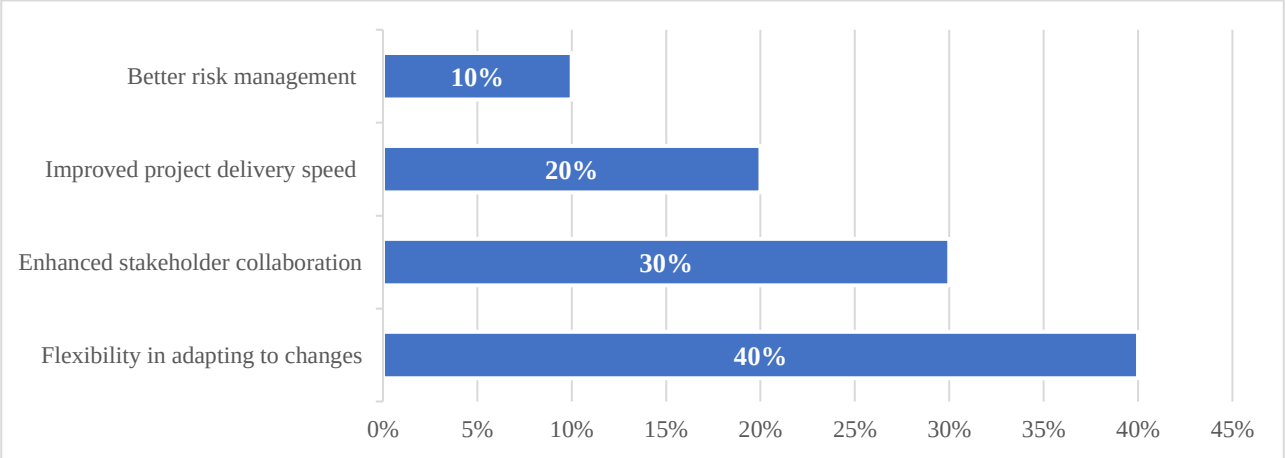

Figure 7: *In your experience, what is the most significant benefit of using a hybrid project management approach?*

The results indicate that flexibility in adapting to changes is perceived as the most significant benefit of using a hybrid project management approach, with 40% (20/50) of respondents choosing this option. This suggests that many see the hybrid method's ability to blend different methodologies as key to responding to shifting project requirements or unforeseen challenges. Adaptability allows teams to pivot when necessary, a critical advantage in dynamic or uncertain environments. Enhanced stakeholder collaboration ranks second with 30% (15/50). Improved project delivery speed, chosen by 20% (10/50), Lastly, better risk management is viewed as the least significant benefit, with only 10% (5/50) of respondents selecting it.

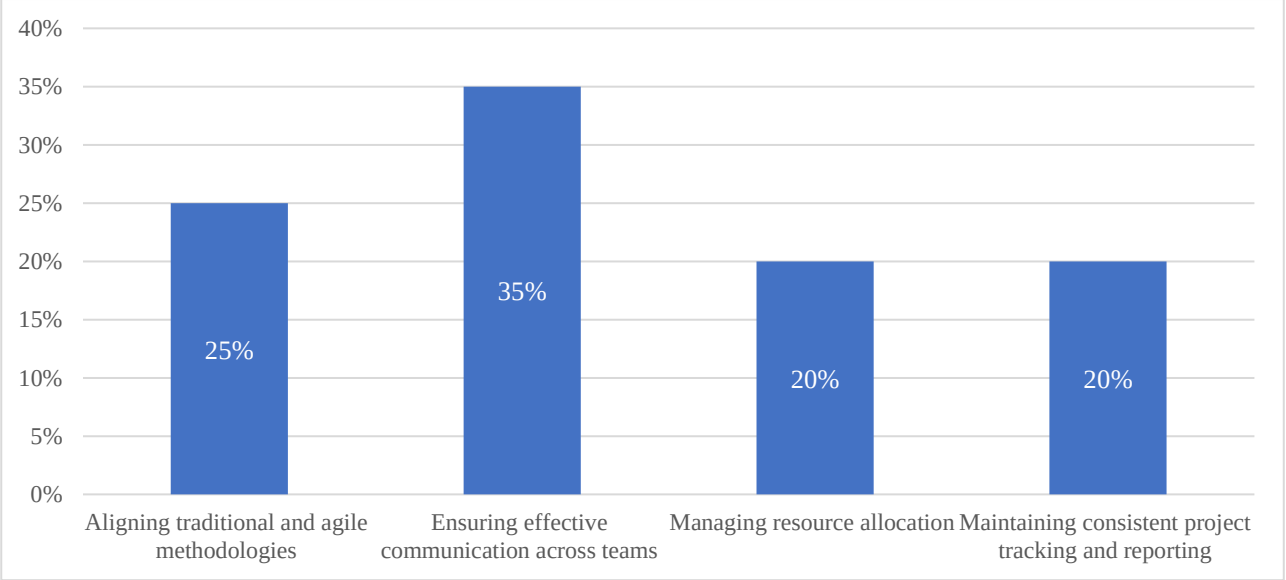

Figure 8: *What is the most challenging aspect of implementing hybrid project management in your organization?*

The respondents reported that 40% viewed flexibility in adapting to changes as the most significant benefit of using a hybrid project management approach. They emphasized that hybrid methods allowed for adjustments during the project, accommodating shifts in scope, resources, or timelines more effectively.

Meanwhile, 30% highlighted enhanced stakeholder collaboration as a key advantage, another 20% mentioned improved project delivery speed, suggesting that the combination of structured planning and Agile flexibility helped accelerate project timelines.

Finally, 10% pointed to better risk management, indicating that the hybrid approach allowed for more effective identification and mitigation of potential issues throughout the project lifecycle.

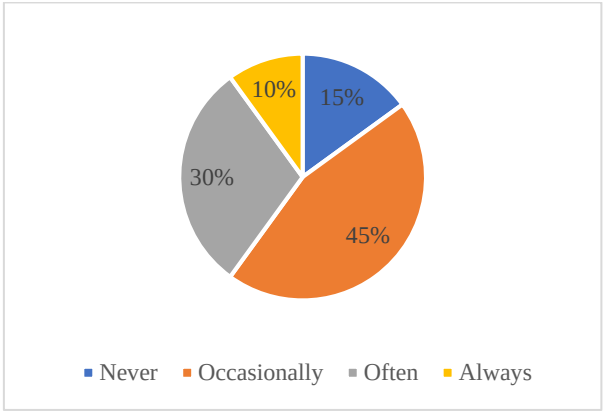

Figure 9: *How frequently do you incorporate Agile practices in your traditionally managed projects?*

The respondents indicated that 45% occasionally incorporated Agile practices in their traditionally managed projects, suggesting that while they primarily relied on traditional methods, they found value in selectively using Agile practices when needed. Additionally, 30% mentioned that they often used Agile practices, indicating a more frequent integration of Agile elements into their projects, 10% stated that they always incorporated Agile practices, demonstrating a complete integration of Agile within a traditional framework, while 15% reported that they never used Agile practices,

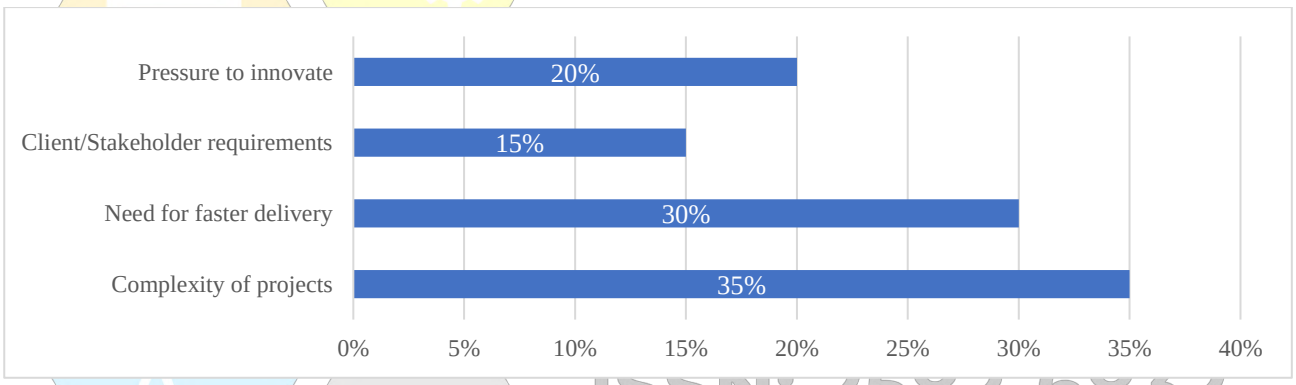

Figure 10: *What is the primary reason your organization decided to adopt a hybrid project management approach?*

The respondents revealed that 35% identified the complexity of projects as the primary reason their organization adopted a hybrid project management approach. Another 30% highlighted the need for faster delivery, indicating that the hybrid approach allowed their teams to balance detailed planning with Agile's speed and adaptability to meet tight deadlines. 20% pointed to client or stakeholder requirements as a significant factor, explaining that hybrid methods helped align project execution with the evolving expectations of stakeholders. Lastly, 15% cited pressure to innovate,

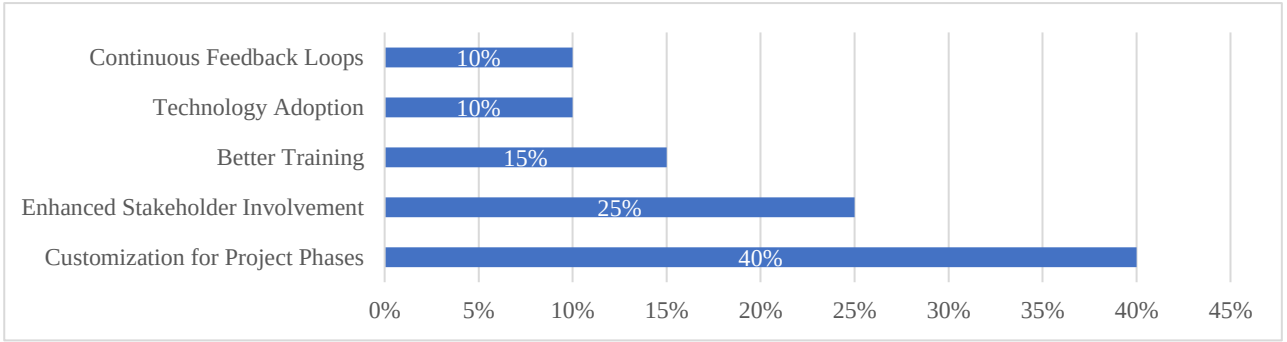

Figure 11: *How can the selection and application of hybrid methods be improved to ensure they are well-suited to the specific needs and complexities of road construction projects in Lusaka?*

Respondents suggested that to improve the selection and application of hybrid methods for road construction projects in Lusaka, several key strategies should be considered.

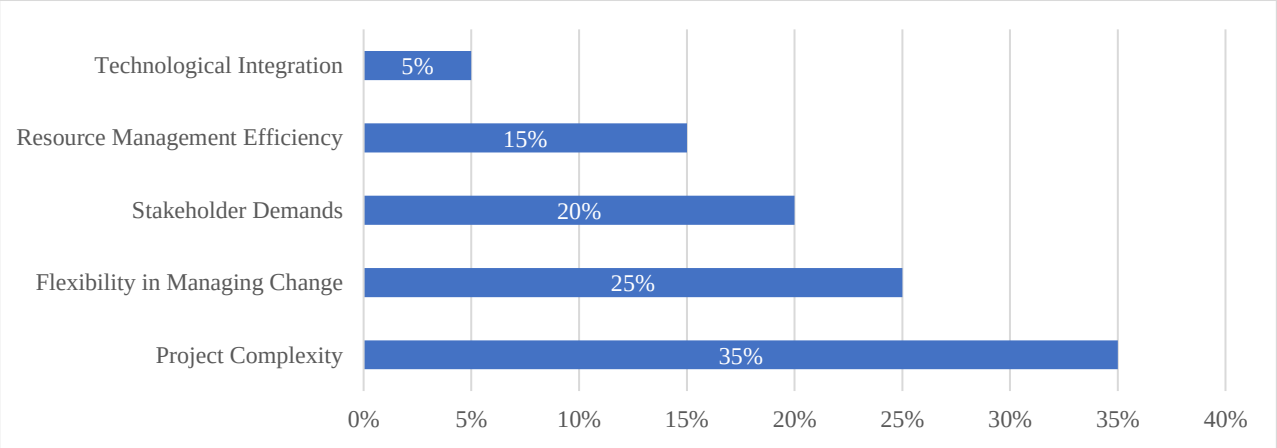

Figure 12: *What factors influence your decision to use hybrid project management methods over traditional or Agile methods?*

Respondents indicated that Agile methods. Most participants (35%) cited the complexity of road construction projects as the primary reason for choosing hybrid methods. Additionally, 25% preferred hybrid approaches for their flexibility in managing unexpected changes that may arise during a project. Stakeholder demands also played a significant role, with 20% mentioning that requirements for quicker delivery or adaptability influenced their choice of hybrid methods. Furthermore, 15% felt that hybrid methods enhanced resource management efficiency by optimizing allocation across different project stages. Lastly, a small group (5%) noted that hybrid approaches were better suited for projects where technology integration was a significant factor.

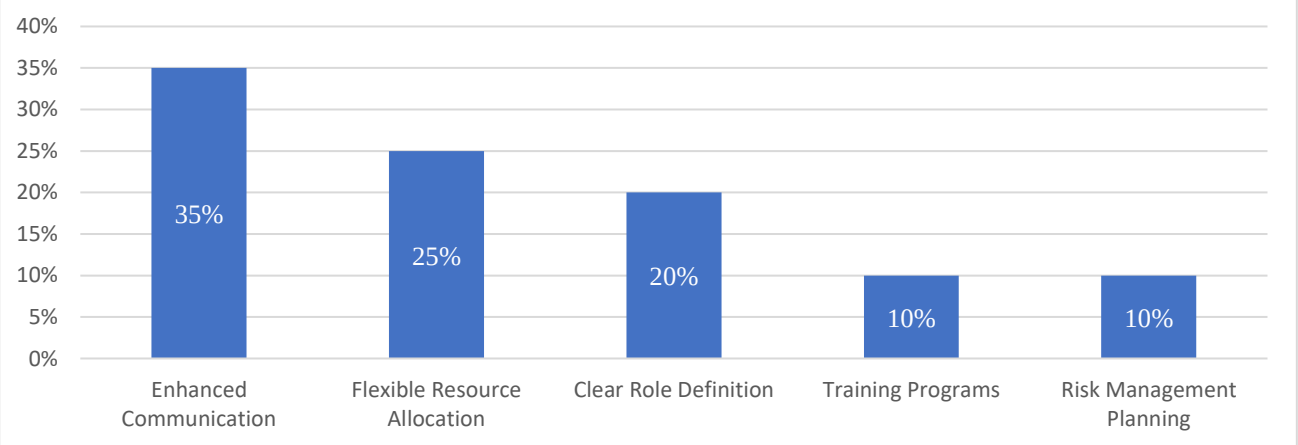

Figure 13: *What strategies do you employ to overcome the challenges associated with hybrid project management?*

The majority (35%) highlighted the importance of enhanced communication, stating that effective strategies, such as regular check-ins, helped address and mitigate challenges. Additionally, some participants (25%) noted that a flexible approach to resource allocation between Agile and traditional teams was crucial for managing difficulties. Several respondents (20%) emphasized the need for clear role definition, explaining that defining team roles helped in navigating hybrid challenges effectively. Furthermore, some organizations (10%) focused on training programs to improve understanding and implementation of hybrid methods. Finally, a smaller group (10%) mentioned the use of risk management planning to proactively address issues arising from hybrid project management.

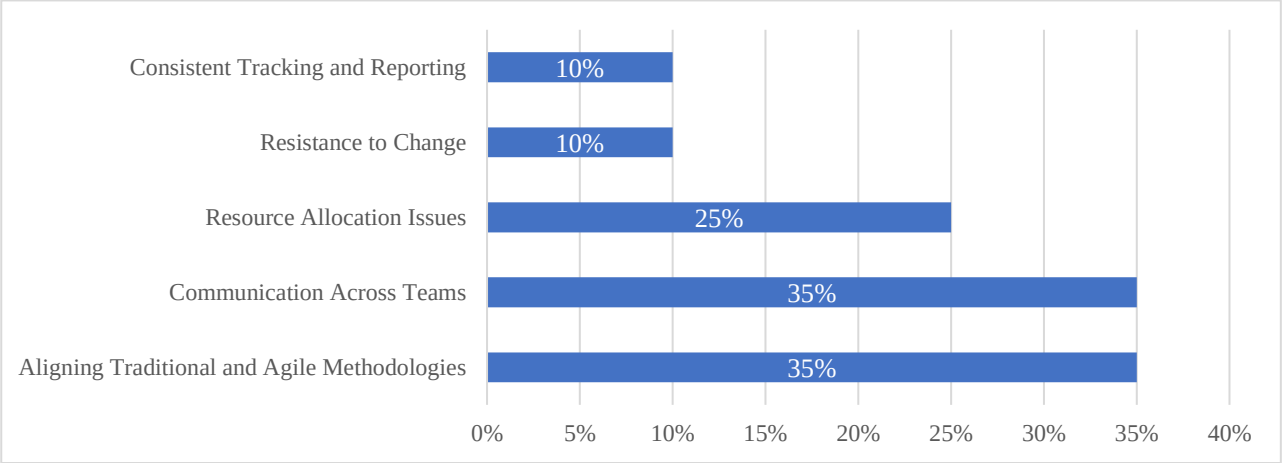

Figure 14. *what are the biggest challenges associated with implementing hybrid methods in Lusaka's road construction projects? How can these challenges be addressed?*

The most commonly cited challenge (35%) was the difficulty in aligning traditional and agile methodologies. Communication across teams was another major challenge, with 25% noting issues that arose from inadequate communication. 20% of the respondents, particularly in managing resources between Agile and traditional phases. Flexible resource management strategies were suggested as a remedy to optimize resource use across different project stages. Some participants (10%) pointed to resistance to change as a barrier to adopting hybrid methods. Lastly, 10% of respondents mentioned the challenge of consistent tracking and reporting across hybrid projects.

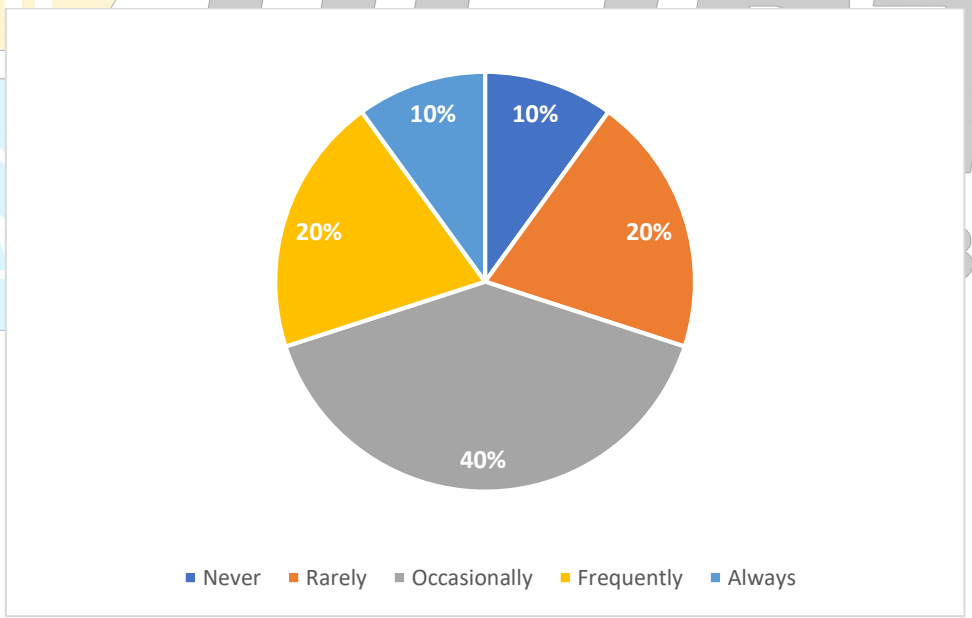

Figure 15: *How often have you been involved in road construction projects in Lusaka that utilized hybrid project methods?*

Respondents reported their involvement in road construction projects in Lusaka that utilized hybrid project methods. They indicated that 10% had never been involved in such projects, while 20% stated they had rarely participated in them. A significant portion, 40%, mentioned that they had occasionally been involved in projects employing hybrid methods. Additionally, 20% reported frequent involvement in hybrid project methods, and 10% claimed they were always engaged in road construction projects that utilized these approaches.

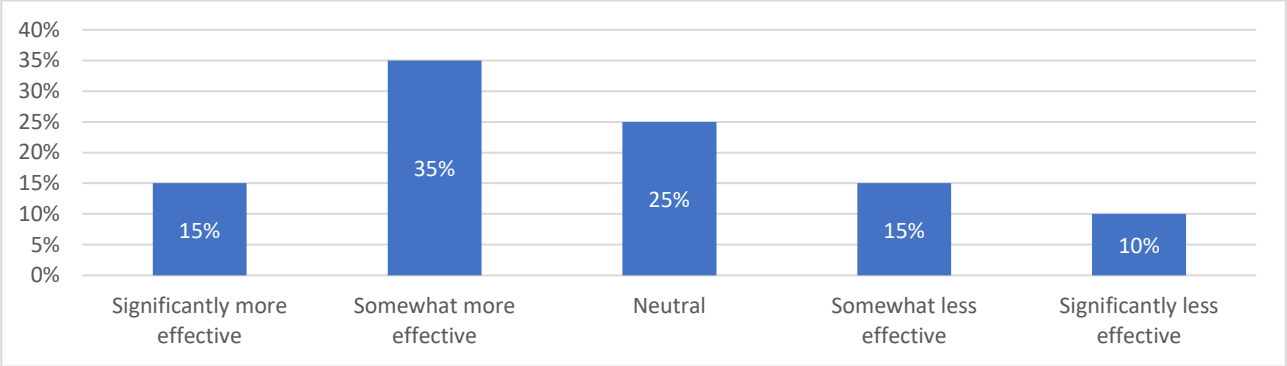

Figure 16: *In your experience, how effective are hybrid methods compared to traditional approaches in completing road construction projects within budget in Lusaka?*

They indicated that 15% found hybrid methods to be significantly more effective, while 35% believed they were somewhat more effective in this regard. Conversely, 25% remained neutral, expressing no strong opinion on the effectiveness of hybrid methods compared to traditional approaches. Additionally, 15% felt that hybrid methods were somewhat less effective, and 10% considered them to be significantly less effective.

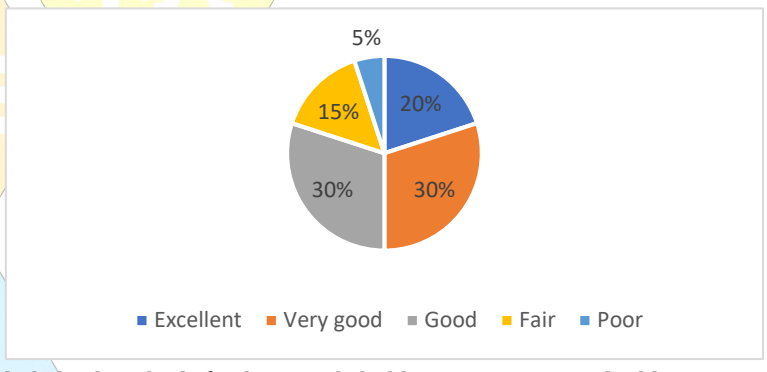

Figure 17. *How well do hybrid methods facilitate stakeholder engagement and address community concerns during road construction projects in Lusaka?*

Respondents evaluated how well hybrid methods facilitate stakeholder engagement and address community concerns during road construction projects in Lusaka. They reported that 20% rated the effectiveness as excellent, while 30% indicated that it was very good. Another 30% felt that hybrid methods were good at facilitating stakeholder engagement and addressing community concerns. In contrast, 15% rated the effectiveness as fair, and 5% considered it poor.

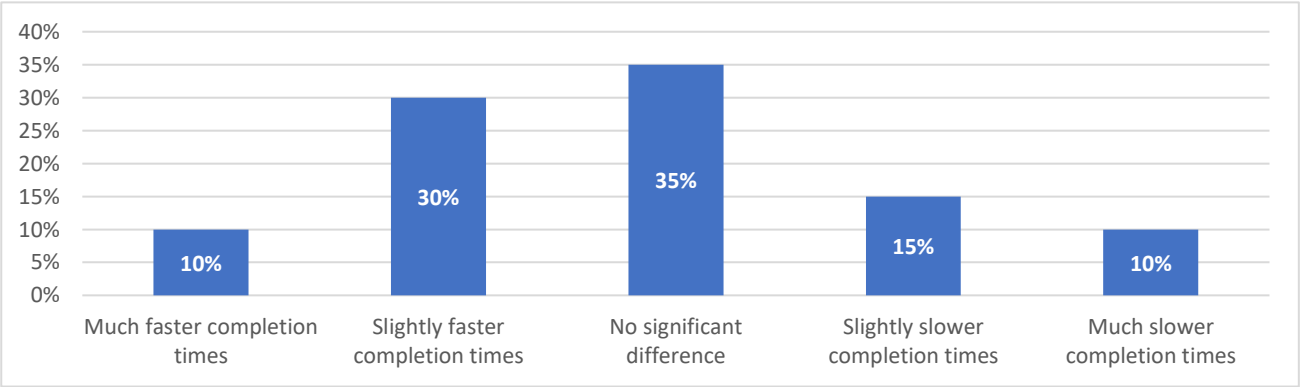

Figure 18. *what extent do hybrid methods support timely project completion compared to traditional methods in Lusaka's road construction projects (considering factors like weather and resource availability)?*

Respondents indicated that 10% believed hybrid methods led to much faster completion times, while 30% felt they resulted in slightly faster completion times. Conversely, 35% reported that there was no significant difference in completion times between hybrid and traditional methods. Additionally, 15% noted that hybrid methods resulted in slightly slower completion times, and 10% indicated they experienced much slower completion times.

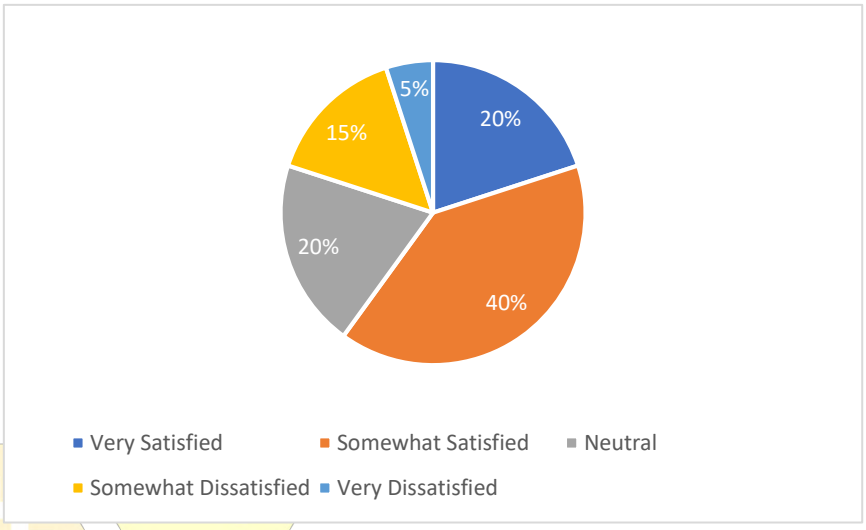

Figure 19: *How satisfied are you with the overall quality of road construction projects delivered using hybrid methods in Lusaka?*

Respondents expressed varying levels of satisfaction with the overall quality of road construction projects delivered using hybrid methods in Lusaka. They reported that 20% were very satisfied with the quality, while 40% were somewhat satisfied. Additionally, 20% maintained a neutral stance regarding their satisfaction. On the other hand, 15% indicated they were somewhat dissatisfied, and 5% expressed that they were very dissatisfied. These findings suggest that a majority of respondents (60%) are satisfied with the quality of road construction projects utilizing hybrid methods, although there remains a notable minority who are either dissatisfied or neutral in their assessment.

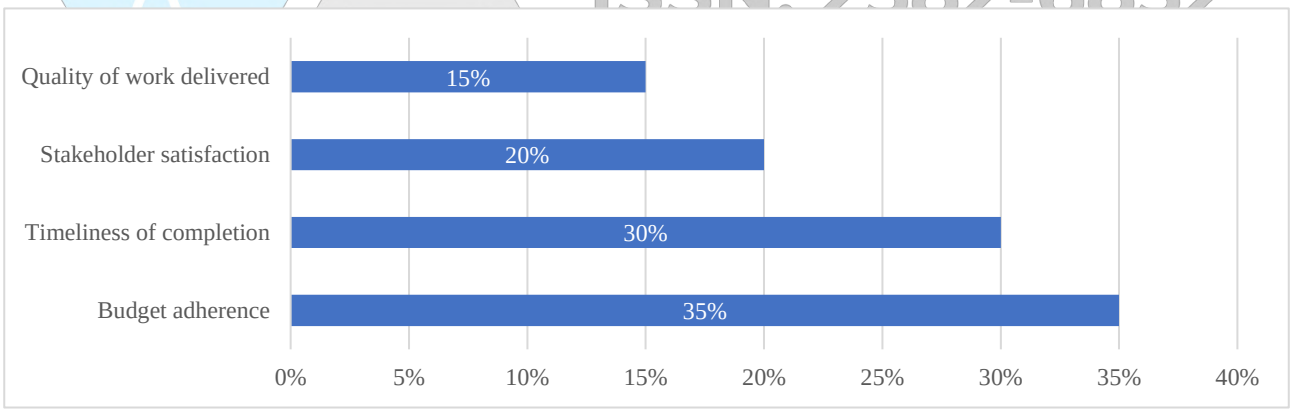

Figure 20: *What metrics do you use to evaluate the effectiveness of hybrid project management methods in your projects?*

35% of responses, indicating its importance in assessing project effectiveness. Timeliness of completion followed closely at 30%, reflecting a focus on whether projects are completed within the set deadlines. Additionally, stakeholder satisfaction was highlighted by 20% of respondents, underscoring the value placed on meeting stakeholder expectations. Lastly, quality of work delivered was cited by 15% of participants as a critical metric for evaluation.

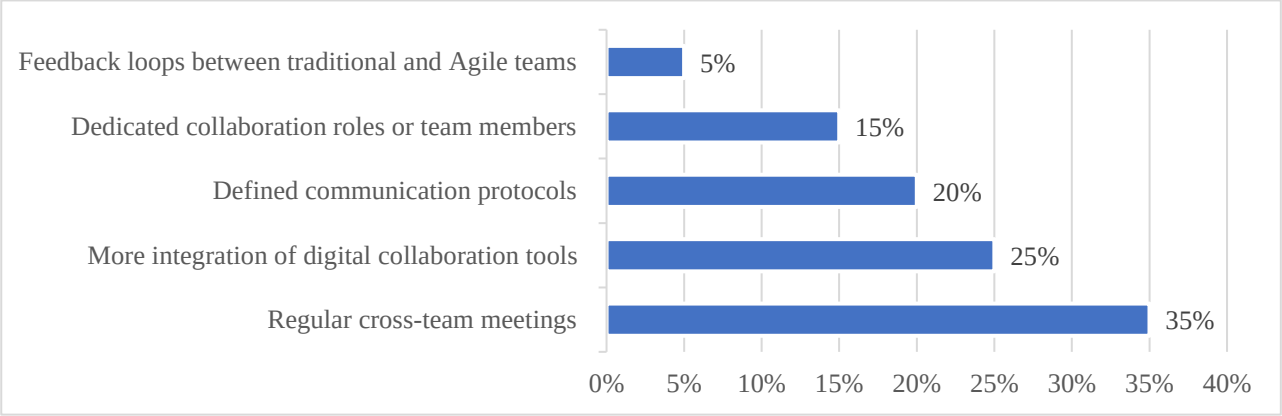

Figure 21: *How can communication and collaboration within project teams be further improved when implementing hybrid methods in Lusaka's road construction projects?*

Respondents provided several suggestions for improving communication and collaboration within project teams when implementing hybrid methods in Lusaka's road construction projects. The most recommended approach was to hold regular cross-team meetings, as indicated by 35% of respondents, highlighting the importance of frequent interaction between different teams. Additionally, 25% emphasized the need for more integration of digital collaboration tools to enhance real-time communication and information sharing. Another key suggestion was to establish defined communication protocols, supported by 20% of participants, which would help clarify communication channels and expectations. Furthermore, 15% of respondents recommended appointing dedicated collaboration roles or team members to facilitate better integration between traditional and Agile teams. Lastly, 5% noted the importance of implementing feedback loops between the traditional and agile teams to ensure continuous improvement and adaptability.

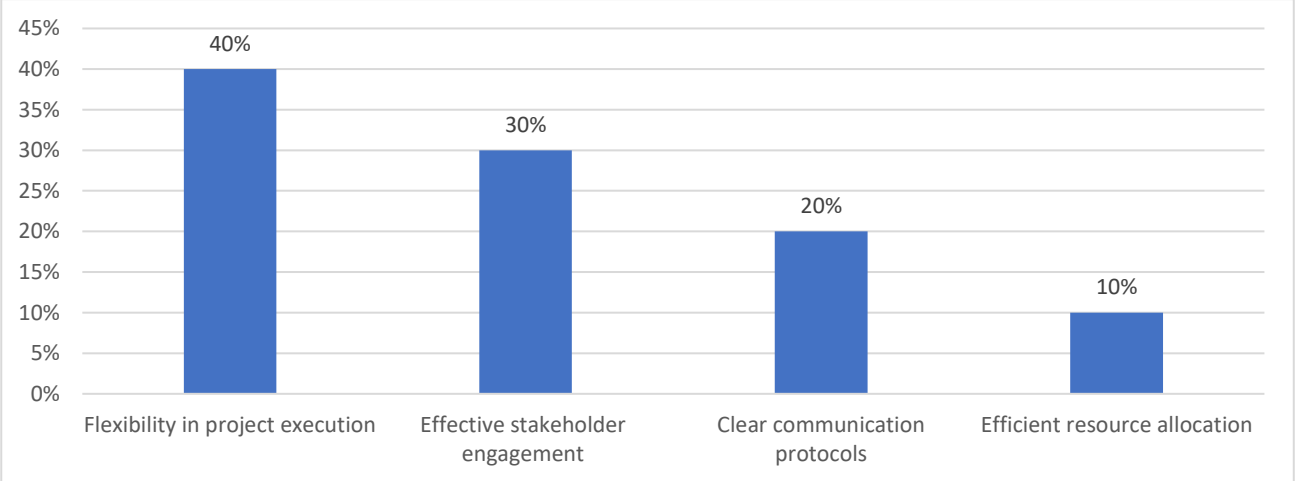

Figure 22: *In your opinion, which specific elements of hybrid project management are most critical for success in Lusaka's road construction projects? Why?*

The most frequently cited element was flexibility in project execution, with 40% of respondents highlighting its importance in adapting to changes such as weather conditions, which can significantly impact project timelines. Effective stakeholder engagement was considered crucial by 30% of participants, as it ensures that projects align with community and government expectations, fostering support and reducing resistance. Additionally, 20% emphasized the necessity of clear communication protocols to maintain alignment between Agile and traditional teams, which is vital for ensuring that all team members are on the same page and working toward common goals. Lastly, 10% pointed out the significance of efficient resource allocation, which is essential for achieving timely completion within budget constraints.

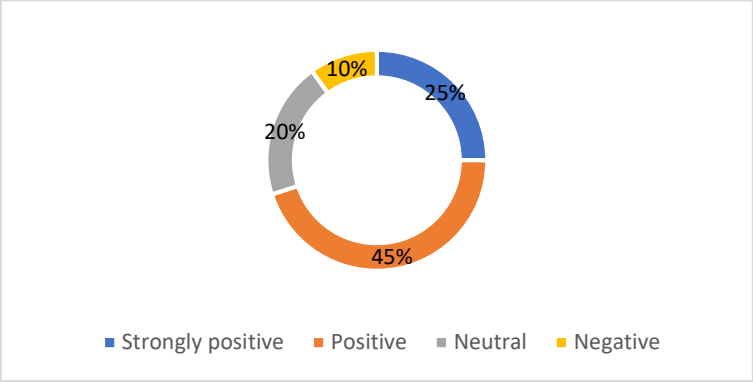

Figure 23: *How would you describe the impact of hybrid project management methods on overall project performance?*

Respondents described the impact of hybrid project management methods on overall project performance in various ways. They indicated that 20% believed the impact was strongly positive, while 50% felt it was positive, suggesting that a significant majority perceive hybrid methods as beneficial to project outcomes. In contrast, 20% maintained a neutral stance, indicating neither a positive nor negative view of the impact. Additionally, 7% reported a negative impact.

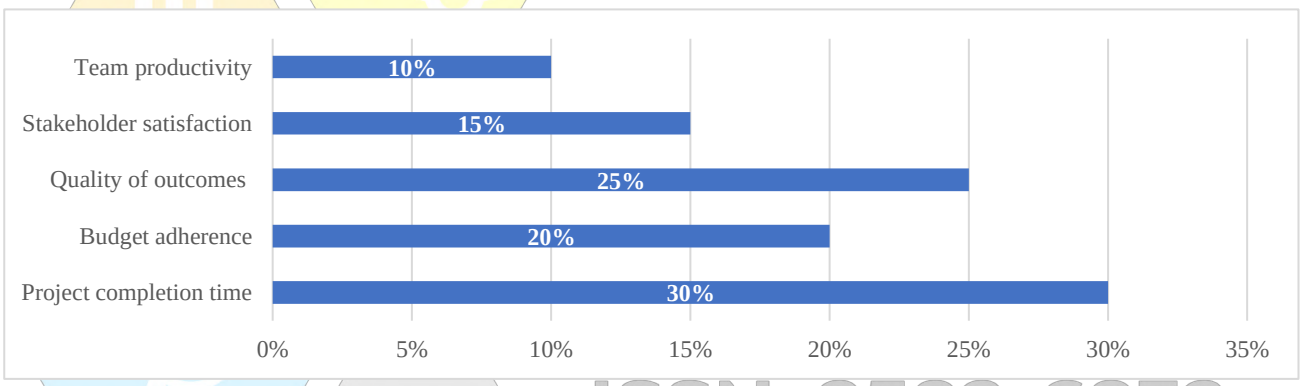

Figure 24: *Which performance metrics have shown the most improvement since adopting hybrid project management methods?*

The most notable improvement was observed in project completion time, with 30% of participants indicating that this metric had significantly enhanced. Following this, quality of outcomes was reported by 25% of respondents as another area of notable improvement. Budget adherence was cited by 20% of respondents, reflecting a positive impact on financial management as well. Additionally, stakeholder satisfaction showed improvement according to 15% of participants, highlighting better alignment with stakeholder expectations. Finally, 10% noted an increase in team productivity.

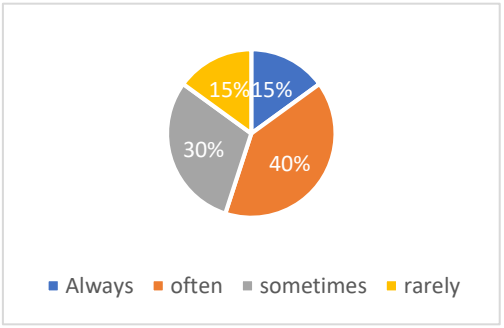

Figure 25: *How consistently do hybrid project management methods improve project performance across different types of projects?*

Respondents expressed varying views 15% indicated that these methods always lead to improved performance. A larger segment, 40%, reported that they often see positive impacts, suggesting a strong belief in the effectiveness of hybrid approaches. Additionally, 30% of participants felt that improvements occur sometimes, indicating that while hybrid methods can be beneficial, the results may not be uniform across all projects. Conversely, 10% stated that performance improvements are rarely observed with hybrid methods.

III. PUBLICATION PRINCIPLES

Discussion of research findings

Discussion and Implication of Findings

This study explored the effectiveness of hybrid project management methods in Lusaka's road construction projects, examining key factors such as project completion, stakeholder engagement, team productivity, and the overall success of projects utilizing hybrid approaches. The insights gathered from the respondents reflect both the benefits and challenges of implementing hybrid methods in complex construction environments.

The data indicates that 50% of respondents preferred hybrid project management methods, which combine traditional and Agile approaches, reflecting a growing trend toward utilizing flexible, adaptive methodologies in the construction sector (results Janet Chembe).
Respondents overwhelmingly agreed that flexibility in adapting to changes was the most significant benefit of hybrid project management, with 40% citing this as the primary advantage This is especially important in road construction, where unpredictable factors such as weather conditions can delay projects. Additionally, 30% of respondents pointed to enhanced stakeholder collaboration, suggesting that hybrid methods foster better communication across various project stakeholders, aligning project objectives with stakeholder expectations. Improved project delivery speed (20%) and better risk management (10%) were also highlighted, indicating that hybrid methods allow for more responsive, real-time adjustments to project plans (results Janet Chembe).

The biggest challenge reported by respondents was aligning traditional and Agile methodologies, with 35% citing this as a major issue. This suggests that while hybrid methods offer flexibility, they also require careful integration to ensure that the distinct elements of both methodologies are harmonized effectively. Communication across teams was also identified as a significant challenge, with 25% of respondents highlighting issues in maintaining clear communication between teams operating under different methodologies. Resource allocation and maintaining consistent tracking and reporting were also highlighted as challenges, suggesting the need for improved tools and processes to manage hybrid projects.

Regarding stakeholder engagement, 80% of respondents rated hybrid methods as good to excellent at facilitating stakeholder involvement and addressing community concerns (results Janet Chembe). This suggests that hybrid approaches, which allow for iterative feedback and adjustments, are well-suited to projects with complex stakeholder needs, such as road construction projects that must balance community, environmental, and governmental expectations.

In terms of project performance, respondents provided mixed views. While 30% noted that hybrid methods resulted in slightly faster completion times, 35% reported no significant difference compared to traditional methods (results Janet Chembe). These findings suggest that while hybrid methods offer flexibility, the benefits in terms of time savings may be project-specific and depend heavily on factors such as resource availability and team coordination.

The overall satisfaction with road construction projects delivered using hybrid methods was relatively high, with 60% of respondents expressing satisfaction (either somewhat or very satisfied) (results Janet Chembe). However, 20% of respondents remained neutral, and 20% expressed dissatisfaction, indicating that while hybrid methods are generally seen as effective, there is room for improvement in ensuring consistent project outcomes across different types of projects and contexts.

IV. CONCLUSION

This research project has provided valuable insights into the effectiveness of hybrid project management methods in road construction projects in Lusaka. The findings indicate that hybrid approaches significantly enhance project performance, particularly in terms of flexibility, stakeholder engagement, and alignment with strategic business goals. Respondents highlighted the importance of customizing hybrid methods to fit the unique challenges of each project, as well as the critical role of effective communication and collaboration among project teams. Despite some challenges, such as aligning traditional and Agile methodologies, the overall sentiment towards hybrid methods is positive, suggesting a promising avenue for improving project

outcomes. A notable 50% of respondents preferred hybrid methods, recognizing the flexibility they offer in adapting to changes, such as weather conditions and project scope. Flexibility, cited by 40% of participants, and enhanced stakeholder collaboration (30%) were identified as key benefits of hybrid approaches. Despite these advantages, challenges remain, particularly in aligning Agile and traditional methodologies, with 35% of respondents identifying this as a major issue. Communication difficulties and resource allocation were also cited as areas needing improvement. In terms of project performance, 30% of respondents reported faster project completion times with hybrid methods, although 35% noted no significant difference compared to traditional methods. Satisfaction with project outcomes was generally high, with 60% of participants expressing satisfaction. However, 20% remained neutral or dissatisfied, indicating that hybrid methods are not universally effective across all projects. The study indicates that hybrid project management methods hold significant potential for improving the efficiency and effectiveness of road construction projects in Lusaka. The flexibility, adaptability, and enhanced collaboration that hybrid methods offer make them a valuable tool for managing the complexities of large-scale infrastructure projects. However, the success of these methods depends on their careful integration, effective communication, and the ability to address the specific challenges of each project.

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