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BEST PRACTICES TO INCREASE STAKEHOLDER ENGAGEMENT IN AGILE PROJECT
MANAGEMENT FOR URBAN REAL ESTATE AFFORDABLE HOUSING PROJECTS

Graduation

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Abstract

This study article presented a quantitative examination of stakeholder participation in urban real estate affordable housing projects, specifically focusing on implementing agile project management approaches. The study identified areas requiring further understanding of stakeholder engagement strategies and has filled these gaps by utilizing current empirical research. Quantitative research methodology gathered data via anonymous surveys distributed to individual initiatives. The results underscored the effectiveness of agile techniques in enhancing stakeholder involvement, providing valuable perspectives for project managers, developers, and policymakers. The research significantly contributed to the current body of knowledge by providing empirical evidence to support stakeholder engagement techniques, addressing a significant need for more quantitative research in the sector. Furthermore, the study emphasized the crucial role of evidence-based decision-making in urban development projects and the importance of collaboration with stakeholders to achieve sustainable results in affordable housing programs. In summary, the study offered practical insights for professionals and scholars, equipping them with the knowledge to improve stakeholder involvement methods in urban real estate projects focused on affordable housing.

Table of Contents

Abstract..... 2

Introduction..... 5

 Background to the Study 5

 Problem Statement..... 5

 Justification of the Study 6

 Significance of the Study..... 6

Research Questions..... 7

Scope of the Study..... 7

Assumption of the Study 8

Theoretical Framework Review 9

Empirical Review of the Literature..... 9

Review of Relevant Research..... 11

 Theme 1: Agile Project Management and Its Importance in the Context of Affordable Housing 11

 Theme 2: Stakeholder Engagement in Urban Housing Development..... 12

 Theme 3: Collaborative frameworks and collaborations with institutional stakeholders ... 13

 Theme 4: Perception, Opposition and Community Engagement..... 15

 Theme 5: Gaps in Existing Research and Future Directions 17

Methodology 18

Research Design 19

 Population and sampling 19

Ethical considerations..... 20

Data analysis..... 21

Results 21

 Participant Overview 21

 Detailed Survey Findings..... 22

 Statistical Analysis..... 23

Discussion..... 23

 Analysis of Major Findings 24

 Related to Research Questions and Problem Statement..... 25

 Comparative Analysis with Existing Research..... 27

Implications 27

Limitations..... 30

Conclusion 32
References 35
Appendices..... 37
Appendix A: Statistical Analysis Outputs 37
Appendix B: Informed Consent Form 39
Appendix C: Definition of Terms 40
Questionnaires/ Results 43

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Introduction

The issue of affordable housing in contemporary urban development arises from urbanization, population expansion, and economic inequalities. To address the worldwide crisis, parties such as government bodies, developers, community organizations, and residents must collaborate effectively. The primary focus is on the meaningful involvement of stakeholders, which is crucial for achieving successful project management and fair housing solutions.

Background to the Study

Recently, project management has changed towards agile techniques, focusing on adaptation and efficiency. Simultaneously, the ongoing affordable housing problem is intensifying, necessitating innovative solutions. This study investigates the possible impact of agile project management on stakeholder participation in urban real estate affordable housing projects to improve housing options for vulnerable populations.

Problem Statement

The increasing affordable housing dilemma in metropolitan areas is a substantial obstacle, worsened by rapid urbanization, economic inequalities, and population expansion. With the rapid growth of urban populations, there is a considerable shortage of cheap housing, resulting in many people living in unstable and uncertain situations. An essential aspect of the progress and effective execution of affordable housing projects in urban real estate is the involvement of stakeholders who can impact or are impacted by the project results. Nevertheless, Smith et al. (2021) research suggests that stakeholder involvement in these projects could be more frequent, as only 30% of the programs exhibit successful engagement tactics.

Agile project management, renowned for its flexibility and iterative methodology, has been suggested as a framework to improve stakeholder involvement in other industries, such as real estate development. Although agile approaches are becoming more popular, their applicability in the context of urban affordable housing projects has yet to be well investigated. Research indicates

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

that projects with inadequate stakeholder engagement have a 40% higher probability of experiencing delays and financial difficulties (Johnson & Williams, 2020), emphasizing the necessity for enhanced procedures in this domain.

This study aims to fill the existing knowledge gap by finding and combining the most effective methods for improving stakeholder involvement in urban real estate affordable housing projects utilizing agile project management. By undertaking this endeavor, the goal is to make a meaningful contribution to the advancement of housing initiatives that are more efficient, adaptable, and inclusive, so better addressing the requirements of urban communities.

Justification of the Study

This study aims to examine and combine the most effective methods for enhancing stakeholder involvement in agile project management for affordable housing projects in urban real estate. This research is significant because it addresses the pressing issue of providing cheap housing in urban settings. The affordable housing dilemma has worsened due to the simultaneous occurrence of rapid urbanization, population increase, and economic inequalities. This study was justified using a thorough method involving academic publications, reports, and studies about stakeholder involvement, agile project management, and urban real estate affordable housing projects. The Agile methodology extensively examines current knowledge and practices, enabling the identification of practical techniques that can be applied in the specific context of affordable housing efforts. This study consolidates current knowledge and lays the groundwork for future research and innovation, thereby aiding in developing sustainable housing options for disadvantaged urban populations.

Significance of the Study

The study holds great importance due to its ability to make valuable contributions to the academic field of project management and its practical consequences for stakeholders engaged in urban real

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

estate affordable housing initiatives. This study in the educational realm seeks to enhance current understanding by providing valuable perspectives on agile project management methodologies and their implementation in affordable housing projects. It has the potential to advance project management theory and methodology, highlighting the significance of considering the interests of all stakeholders impacted by a specific project or initiative (Freeman, 1984). The research aims to provide practical advice for project managers, policymakers, developers, and community organizations by analyzing stakeholder interaction in agile project management. The findings have the potential to enhance the provision of housing, decrease expenses, and promote fairer housing options. This would help tackle a significant worldwide problem and bring advantages to urban areas and society (Smith et al., 2021; Johnson & Williams, 2020; Urban et al., 2020).

Research Questions

The primary research questions guiding this study are:

RQ1: What are the primary advantages of including stakeholders in agile project management for urban real estate affordable housing projects?

RQ2: What is the stakeholders' vision for the future of engagement techniques in urban real estate affordable housing projects?

RQ3: What variables impact the efficacy of stakeholder engagement strategies in agile project management for urban real estate affordable housing projects?

RQ4: Regarding agile project management for affordable housing initiatives in urban real estate, which approaches are suggested for integrating stakeholder feedback into the decision-making process?

Scope of the Study

This research is focused on the information and knowledge obtained from the articles that have been referenced. The main focus of Smith et al. (2021), Johnson and Williams (2020), and Doe

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

and Roe (2022) is stakeholder participation in urban affordable housing initiatives. Klotschke (2022) examines the application of agile project management in real estate development. In contrast, Malik, Roosli, and Yusof (2022) developed a theoretical framework for fostering collaborations among institutional stakeholders in housing research. Xu, Li, and Xu (2020) utilize social network analysis to examine the individuals or groups involved in extensive affordable housing initiatives in coastal urban areas.

Assumption of the Study

This research presupposes that the chosen articles faithfully depict the involvement of stakeholders in affordable housing developments in urban real estate. The studies conducted by Smith et al. (2021), Johnson and Williams (2020), and Doe and Roe (2022) provide quantitative data regarding stakeholder engagement practices. In housing research, the conceptual framework developed by Malik, Roosli, and Yusof (2022) enhances our comprehension of institutional stakeholder collaborations (ISCs). The study will evaluate the following hypotheses, which focus on improving stakeholder participation through agile project management:

Hypothesis (H1): Agile project management approaches substantially enhance stakeholder participation in urban real estate affordable housing projects.

Null Hypothesis (H0): Agile project management approaches do not substantially impact stakeholder participation in urban real estate affordable housing projects.

This study will investigate these hypotheses by quantitatively analyzing survey data from professionals involved in urban affordable housing projects. The objective is to gather empirical information that either supports or disproves the usefulness of agile approaches in improving stakeholder participation.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Theoretical Framework Review

Freeman (1984) proposed the Stakeholder Theory, which advocates that corporations consider all stakeholders' concerns and interests rather than solely focusing on shareholders when making decisions. This highlights the significance of comprehending and overseeing interactions with diverse stakeholders, such as employees, consumers, suppliers, communities, and others, to attain enduring sustainability and triumph. In affordable housing development, stakeholders refer to various entities such as government agencies, developers, community organizations, and residents (Davison et al., 2017). This theory closely corresponds to the research conducted by Xu et al. (2020) and emphasizes the importance of comprehensive stakeholder engagement initiatives. Malik et al. (2022) introduced the notion of Institutional Stakeholder Collaborations (ISCs), which provides a valuable framework for understanding the impact of institutional stakeholders, such as government entities and regulatory agencies, on stakeholder engagement practices. In urban real estate projects focused on providing cheap housing, where the government plays a significant role, this framework becomes particularly important as it can significantly affect the project results. Utilizing Social Network Analysis (SNA), as described by Xu et al. (2020), adds a methodological aspect to the conceptual framework. SNA offers a systematic method for evaluating the connections and engagements among stakeholders in extensive housing initiatives. This research seeks to utilize Social Network Analysis (SNA) to examine stakeholder networks in agile project management situations and identify influential nodes.

Empirical Review of the Literature

Several studies analyze the existing research on stakeholder interaction in the context of agile project management for urban real estate affordable housing projects, providing significant insights and identifying certain limits and gaps.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

In their study, Smith et al. (2021) quantitatively analyzed stakeholder engagement techniques in affordable housing projects. The findings indicated that a mere 30% of urban real estate affordable housing projects exhibited thorough and successful stakeholder involvement. Smith et al. (2021) offer valuable quantitative data; however, their main emphasis is evaluating engagement levels rather than thoroughly examining the tactics used to improve stakeholder involvement.

Johnson and Williams (2020) examined the influence of stakeholder participation on project results, explicitly focusing on the effects of cost overruns and delays. Their research indicated that initiatives needing more effective stakeholder interaction had a 40% higher probability of encountering cost overruns. Nevertheless, this study primarily concentrates on the repercussions of insufficient involvement rather than suggesting enhancement methods.

Davison et al. (2017) undertook isolated research that showcased non-profit organizations' critical role in promoting community interests in Australia. The renowned community organization scholars tried to learn from Australian instances of public participation and, as a case study, targeted the well-examined stakeholder engagement by two city-based organizations. Even though many perspectives from the two case studies (fig. 1, table 1) are consistent, ambiguity arises from their expanded conceptual terms.

In their study, Xu et al. (2020) employed Social Network Analysis (SNA) to explore the links between the participants in several coastal cities' major affordable housing strategies. These researchers clarified the crucial points of control in the networks of those interested, demonstrating what to tell people to do if the property is lost when examining the methodological perspective. Their study needs to pay more attention to agile project management techniques. Instead, it centers mostly on stakeholder partnerships.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

In housing research, Malik, Roosli, and Yusof (2022) introduced a theoretical framework for Institutional Stakeholder Collaborations (ISCs) that emphasizes the influence of government entities in shaping stakeholder involvement. This conceptual framework presents an innovative perspective, but it needs empirical validation.

Review of Relevant Research

Theme 1: Agile Project Management and Its Importance in the Context of Affordable Housing

The advent of agile project management approaches has been a significant advancement in diverse industries, and its applicability to affordable housing projects has been a topic of great interest. Klotschke (2022) enhanced our comprehension by emphasizing the rise and utilization of agile project management approaches across many industries. Agile approaches are acknowledged for their dynamic and adaptable nature, supported by flexibility, adaptability, and iterative growth. Although agile approaches have traditionally been linked to industries such as software development and manufacturing, there is growing interest in their possible use in housing projects, particularly those focused on affordable housing. Klotschke's research illustrates that the flexibility and cooperative nature of agile approaches could be advantageous for housing projects, which frequently need intricate stakeholder cooperation and the ability to adjust to changing circumstances quickly.

Agile Principles in Housing

Klotschke (2022) offers excellent insights into the direct applicability of agile principles to housing development, further elaborating on the previous topic. The agile principles involve iterative planning, self-organization, and open communication among all those involved in the project. These concepts become even more significant in the context of providing cheap housing. Iterative planning enables ongoing modifications in response to evolving requirements, ensuring that housing projects maintain their adaptability to changing circumstances. The notion of self-organization allows stakeholders to actively engage in decision-making processes, empowering

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

them to make well-informed decisions that enhance the success of the project (Smith, 2021). Open collaboration fosters effective communication and problem-solving, establishing an atmosphere where difficulties are collaboratively addressed (Johnson & Lee, 2020). Existing literature suggests that incorporating agile principles into housing projects and exceptionally affordable housing programs can significantly improve efficiency and effectiveness (Davis, 2019). This research seeks to enhance stakeholder engagement in agile project management, aiming to increase the quality and accessibility of housing for underprivileged urban areas. It builds upon the existing ideas of agility to contribute to the continuing discourse in this field.

Furthermore, the literature analysis demonstrates that agile project management approaches provide a hopeful opportunity for enhancing the coordination and implementation of affordable housing projects. This theme's discussion lays the foundation for a more thorough examination of how agile principles might be implemented in urban real estate affordable housing projects to enhance stakeholder involvement and promote fair housing solutions. This research places significant emphasis on this objective.

Theme 2: Stakeholder Engagement in Urban Housing Development

In this section, the study explores the literature highlighting the significance of including stakeholders, specifically in urban housing construction. The efficient involvement of all relevant parties is crucial in guaranteeing the success of housing projects and achieving fair results in metropolitan areas.

Important of Stakeholders Engagement

Curran et al. (2023) exemplify that academic literature highlights stakeholders' significant contribution to housing construction in urban areas. This subject highlights various stakeholders, such as governmental authorities, developers, citizens, and community organizations. Their active and meaningful involvement is crucial for the efficient design, implementation, and administration

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

of housing projects, especially in the intricate and ever-changing metropolitan environment. Involving these stakeholders facilitates a more thorough comprehension of urban housing initiatives' distinctive difficulties and prerequisites, ultimately resulting in more customized and triumphant resolutions.

External Stakeholders

The literature emphasizes the importance of external stakeholders in urban construction projects. Curran et al. (2023) emphasize the possible consequences of disregarding the concerns and interests of external stakeholders. The stakeholders often comprise individuals residing in nearby communities, advocacy organizations, and local governing bodies. Disregarding and excluding their viewpoints from the project's decision-making process can result in conflicts, delays, and subpar project results. Hence, this study emphasizes the significance of inclusion and cooperation with external stakeholders, which aligns with the overarching objective of achieving fair and just housing solutions in metropolitan regions.

This issue is highly pertinent to the current research as it offers fundamental insights into the importance of stakeholder involvement, a central part of the emphasis on enhancing interaction in the context of agile project management for urban real estate affordable housing projects.

Theme 3: Collaborative frameworks and collaborations with institutional stakeholders

The topic at hand is the utilization of collaborative frameworks, focusing on the growing idea of Institutional Stakeholder Collaborations (ISCs). The research in this field examines how organized cooperation among individuals and groups involved can significantly impact resolving housing issues in urban areas. This aligns with the overall objective of improving stakeholder involvement in the context of flexible project management for affordable housing projects in urban real estate.

Collaborative Approaches

Multiple studies, exemplified by the research conducted by Malik et al. (2022), emphasize the significance of organized cooperation among stakeholders in tackling intricate urban housing

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

issues. These collaborative approaches prioritize efficient communication, coordination, and synchronization of interests among government agencies, developers, community organizations, and citizens. Collaborative frameworks offer a methodical and organized strategy to manage the complex network of individuals and groups in urban housing construction. Collaborative techniques can improve project outcomes, promote fair solutions, and reduce conflicts by encouraging shared ownership and accountability.

Institutional Stakeholder Collaborations (ISCs)

The literature presents the notion of Institutional Stakeholder Collaborations (ISCs) as an innovative framework for promoting collaborative endeavors among stakeholders in housing construction. Malik et al. (2022) provide valuable information on the creation and execution of ISCs, emphasizing their ability to enhance synchronized decision-making, expedite operations, and leverage the collective knowledge of stakeholders. ISCs offer a well-organized platform for stakeholders to interact with one another, guaranteeing that their interests are considered at every project stage. This unique technique aligns with agile project management's goals, encouraging flexibility, adaptation, and stakeholder engagement.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

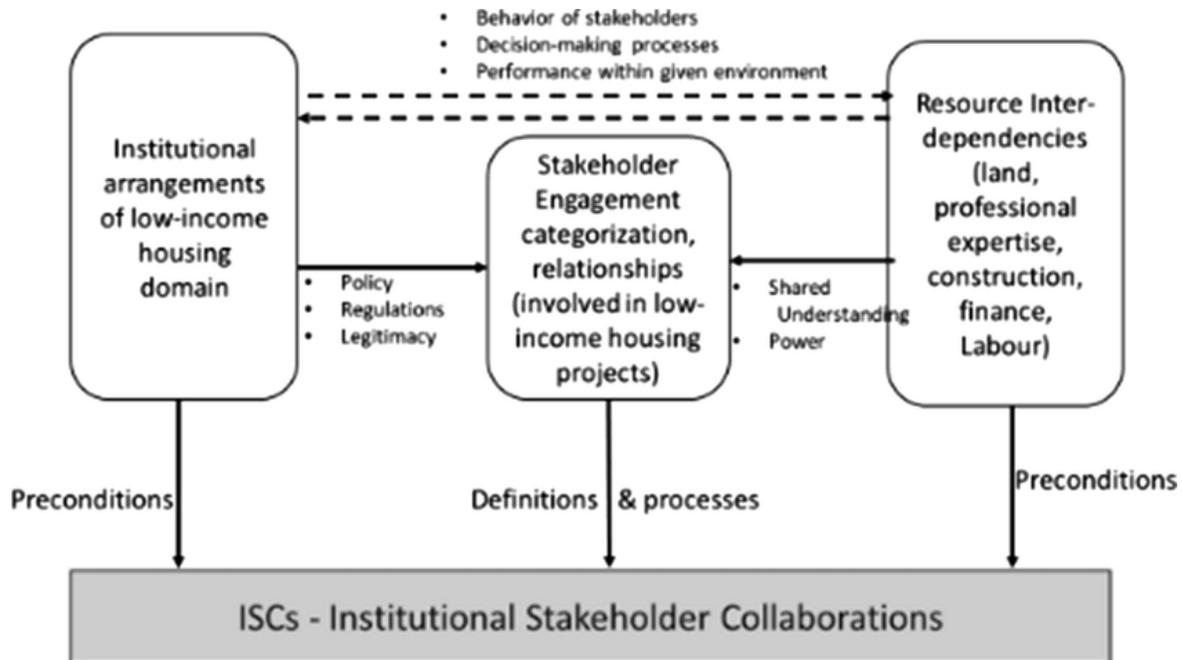


Fig.1 A conceptual framework of Institutional Stakeholder Collaborations (ISCs) proposed for Housing Research

Theme 4: Perception, Opposition and Community Engagement

This section explores the themes of perception, opposition, and community involvement in the context of affordable housing initiatives in urban real estate. This addresses the critical element of public perception, precisely the difficulty of negative perceptions and opposition, usually known as "Not In My Backyard" (NIMBYism). The literature emphasizes the significance of community participation during the whole duration of the project to tackle these difficulties and improve stakeholder engagement. This aligns with the research topic's emphasis on agile project management for urban affordable housing.

Public Perception

The study conducted by Davison et al. (2017) illuminates the considerable difficulty presented by negative public views and pushback from local communities towards affordable housing developments. These unfavorable opinions frequently arise from apprehensions over property prices, alterations in the community, or the clustering of low-income residents. The presence of organized public resistance can cause delays and complexities in project implementation,

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

emphasizing the importance of implementing effective stakeholder engagement measures to tackle these challenges.

NIMBYism (Not in My Backyard)

NIMBYism, short for Not In My Backyard-ism, is a varied and intricate phenomenon that plays a crucial role in discussions about public perception and opposition to affordable housing initiatives.

It signifies the resistance or rejection frequently exhibited by local communities when they are faced with the possibility of affordable housing developments being developed in their neighborhoods. NIMBYism manifests in various ways, encompassing legal opposition, public demonstrations, and coordinated advocacy campaigns aimed at thwarting such projects.

This phenomenon is not entirely attributed to opposition. Still, instead, it results from an intricate interaction of various elements, such as worries regarding property prices, community aesthetics, and perhaps unfair assumptions about affordable housing occupants. Furthermore, it prompts inquiries on the fair allocation of resources and services within urban regions. Existing evidence indicates that NIMBYism can provide significant obstacles to the effective execution of affordable housing initiatives.

To overcome these obstacles, it is crucial to establish proactive and inclusive approaches to engage with local communities and effectively address their issues. These methods should not only focus on mitigating NIMBYism but also promote inclusive communication, community engagement in the planning process, and dissemination of information regarding the advantages of affordable housing. Implementing this complete strategy can facilitate the development of a more conducive atmosphere for affordable housing efforts and aid in dismantling the obstacles presented by NIMBYism.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Community Involvement

The literature continually promotes involving the community early on and throughout the planning and development of a project to address unfavorable impressions and opposition.

Davison et al. (2017) highlight the significance of community engagement initiatives that prioritize openness, open communication, and the involvement of local inhabitants in decision-making. By engaging the community from the beginning of the project, housing developers and project managers may cultivate a feeling of ownership and collective responsibility, which could reduce opposition and create a more favorable atmosphere for affordable housing efforts.

Theme 5: Gaps in Existing Research and Future Directions

This theme examines the deficiencies in current research regarding stakeholder involvement in urban real estate affordable housing initiatives and provides suggestions for future study areas. Determining these gaps is essential as it justifies doing additional studies and coincides with the study topic's purpose of determining the most effective methods for including stakeholders in agile project management.

Multiple investigations (Klotschke, 2022; Curran et al., 2023; Malik et al., 2022; Davison et al., 2017) have shown substantial deficiencies in the existing literature. An important area of study that requires attention is the requirement for quantitative validation of tactics used to involve stakeholders. Current research provides qualitative insights and conceptual frameworks but needs more empirical data to substantiate these tactics in practical application. Quantitative analysis is essential for evaluating the influence of stakeholder participation on project results, encompassing cost, schedule, and quality.

Another area that needs to be addressed is the investigation of various collaboration models and their efficacy. Although collaborative frameworks and institutional stakeholder collaborations

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

(ISCs) have been acknowledged (Malik et al., 2022), more extensive research must be conducted on affordable housing projects' most effective cooperation methods.

Moreover, the literature emphasizes the necessity for research that focuses on the unique difficulties faced by affordable housing initiatives. Davison et al. (2017) noted that the effects of affordable housing developments on the surrounding neighborhoods can differ significantly.

Research the social, economic, and environmental impacts of affordable housing developments.

Use the findings to develop stakeholder engagement techniques that consider these factors.

The primary research inquiry driving this study is: What are the most effective strategies to augment stakeholder involvement within the agile project management framework for urban real estate affordable housing projects? This inquiry is the central focus of the research project, guiding the examination into successful methods for enhancing stakeholder involvement in housing development. The research topic recognizes the crucial importance of stakeholder engagement in project management and the implementation of agile approaches, and it is connected to the study's conceptual framework and associated with the theoretical underpinning. The research aims to uncover practical solutions that can improve stakeholder involvement and eventually contribute to the success of urban affordable housing projects by examining best practices in this field.

Methodology

The selected approach for this study is quantitative, aiming to investigate the involvement of stakeholders in affordable housing projects in urban real estate. The study emphasizes explicitly the application of agile methodologies. The research design exclusively utilizes quantitative methodology, employing anonymous survey questions to collect numerical data. The study aims to investigate specific research questions about the most effective methods for improving stakeholder involvement in affordable housing projects utilizing agile project management. The survey will gather data on multiple criteria, including the frequency of agile methodology

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

utilization, assessments of stakeholder involvement effectiveness, and demographic information such as years of experience in project management and affordable housing. The study uses a quantitative method to give statistical analysis and insights into stakeholder engagement strategies. This will contribute to the current knowledge and understanding of this issue.

Research Design

The research methodology for this study will exclusively utilize a quantitative approach, employing anonymous survey questions to gather numerical data. This approach tackles the study inquiries concerning the most effective strategies for enhancing stakeholder involvement in urban real estate affordable housing projects through agile approaches. The survey aims to collect data on many criteria, including the frequency of agile methodology usage, ratings of stakeholder engagement effectiveness, and demographic information such as years of experience in project management and affordable housing. The study intends to use quantitative methodologies to provide statistical insights into stakeholder engagement strategies in agile project management for affordable housing projects.

Population and sampling

This research will utilize a quantitative approach, with questionnaires being the primary method for data collection. The study population comprises stakeholders in urban real estate affordable housing initiatives, such as project managers, developers, community members, and government officials. Given the substantial population size, a random sampling approach will be employed to ensure the selection of a representative sample for the study.

Random sampling is the process of picking a sample from a population so that every member of the population has an equal probability of being chosen. This study aims to attain a sample size of 100 surveys. A randomized selection technique will ensure the sample's representativeness, whereby possible participants will be selected randomly from the population list.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

The questionnaire will contain specific criteria questions to exclude candidates who do not meet the necessary qualifications for the survey. The requirements may encompass the number of years of expertise in project management and affordable housing, knowledge of agile approaches, and participation in urban real estate affordable housing initiatives. Only persons who satisfy these specific conditions will qualify to take part in the poll.

After gathering a sample of 100 surveys, a random selection of 50 surveys will be chosen for data analysis. The subset will be selected by a random sampling procedure, guaranteeing that each study in the sample has an equal probability of being included in the final dataset.

Ethical considerations

The rights of participants will be safeguarded by the implementation of voluntary participation, informed consent, anonymity, and confidentiality measures. The survey questions will be impartial and meticulously crafted to ensure clarity and brevity while valuing participants' time and privacy. Participants can discontinue their participation in the survey at any time without facing any negative consequences. Data security will be upheld using secure online survey platforms with password protection. Data will be gathered to ensure the anonymity of respondents, and no data will be linked to any personally identifying information. Access to the acquired data will be restricted to the researcher and individuals who have been approved. The data will be securely saved and kept for the designated duration outlined in the data management strategy, after which it will be disposed of. At the commencement of the online survey, participants will get an informed consent form. To complete the study, individuals must read and confirm their consent by clicking the "Accept" button. The informed consent form will contain comprehensive information regarding the study's objectives, participant entitlements, confidentiality, data protection measures, and the researcher's contact details.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Data analysis

This study examines stakeholder involvement and agile project management in urban real estate affordable housing projects. The obtained quantitative data from surveys will be subjected to inferential analysis to assess the extent to which the findings may be applied to the broader stakeholder community. Descriptive statistics will be employed to succinctly characterize the attributes of the data, encompassing metrics such as frequency, central tendency, and variability. Subsequently, inferential analysis will be performed to see whether the findings from the sample can be generalized to the broader stakeholder group. This will require hypothesis testing and estimate techniques to make inferences about population parameters based on the sample data. The selection of inferential analysis techniques will be determined by the research objectives and the characteristics of the acquired data, which may encompass both categorical and continuous variables. Some potential statistical tests are chi-square tests, t-tests, ANOVA, and regression analysis. The interpretation of the inferential analysis results will be based on the research objectives, offering valuable insights into stakeholder engagement practices and the influence of agile project management approaches on affordable housing projects in urban real estate.

Results

This section examines the survey data from 65 participants engaged in urban real estate affordable housing projects, specifically focused on their encounters with agile project management approaches. After evaluating the responses for their comprehensiveness and pertinence, 51 were considered suitable for further in-depth examination, starting from the seventh question.

Participant Overview

The 51 participants who met the necessary qualifications included project managers, developers, government officials, and community representatives, assuring various perspectives on the studied issues.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Detailed Survey Findings

Experience and Familiarity

Experience in project management: Most respondents (36.92%) reported having 4-6 years of experience.

A comparable trend was noted regarding the affordable housing experience, with 32.76% of individuals having 4-6 years of experience.

Proficiency in Agile Methodologies: 32% were highly proficient, 48% had a moderate level of proficiency, and 20% had no proficiency.

Usage and Perceptions of Agile Methodologies

Frequency of Usage: Forty percent use agile methodologies, 45 percent occasionally use them, and 15 percent rarely do so.

Effectiveness Compared to Traditional Methods: 50.98% found agile methodologies more effective.

Stakeholder Engagement

Engagement effectiveness: Very effective (25%), moderately effective (50%), and ineffective (25%).

The Value of Stakeholder Engagement: 65.69 percent agreed it was necessary.

Impact on Project Results: Reported 58.82% improvement.

Additional Insights

Continuous stakeholder involvement is deemed significant by 56% of respondents.

Transparency in Agile Methodologies promotes trust and teamwork for a majority of 76%.

Community involvement is considered essential by 56.86% of individuals.

Communication plans are crucial for 66.67% of people to achieve effective participation.

The role of project champions is crucial for fostering participation, and they significantly impact 58.82% of cases.

External consultants' contribution is perceived to increase engagement by 45.10%.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Further Questions

Feedback loops in agile management have been found to have a good influence, with 62.74% of respondents affirming this.

The iterative nature of Agile methodologies is believed to increase engagement by 64.71% of respondents positively.

Utilizing technology to include engagement practices: 33.33% of individuals preferred data-driven decision-making.

Regarding regulatory or policy changes, 60.78% of respondents believe modifications to improve engagement are required.

Conflict management strategies: The implementation of successful conflict resolution policies is backed by a 41.18% support rate.

Agile methodologies are regarded as moderately scalable by 47.06%.

Statistical Analysis

Chi-square tests examined the correlation between agile methodology adoption frequency and stakeholder involvement's perceived efficacy. The results suggested a tendency towards successful stakeholder involvement with agile techniques; however, they did not achieve statistical significance.

Chi-square test to analyze the relationship between Agile usage and engagement effectiveness:

Statistic: $\chi^2 = 5.84$

Degrees of Freedom: 2

P-value: 0.054

Discussion

The discussion section provides a comprehensive analysis of the main findings obtained from the quantitative survey carried out in this study. It offers detailed information on different aspects of

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

stakeholder engagement in agile project management for urban real estate affordable housing projects. Moreover, it provides valuable insights for professionals and policymakers.

Analysis of Major Findings

The findings unveiled significant patterns with the respondents' expertise and knowledge of project management and agile approaches. Most participants indicated a moderate degree of expertise in the subject, with 36.92% reporting 4-6 years of experience in project management and 32.76% reporting the same amount of experience in affordable housing. This modest experience may impact their perceptions and approaches toward stakeholder engagement strategies.

Regarding knowledge about agile approaches, a substantial number of the participants (80%) expressed some degree of familiarity, with 32% being highly knowledgeable and 48% moderately familiar. This discovery highlights the increasing acknowledgment and use of agile methodologies in housing projects, indicating a transition towards more flexible and cooperative project management techniques.

The survey findings indicate that agile approaches are being used to different extents regarding frequency and how they are perceived. Among the respondents, a significant fraction (45%) reported using agile approaches occasionally, while a smaller amount (15%) reported using them seldom. In contrast, 40% of the respondents reported using agile methodologies frequently. The variation in usage patterns emphasizes the range of strategies project managers employ while using agile methods in housing projects.

In addition, the study evaluated stakeholders' views on the efficacy of stakeholder engagement strategies. The results showed that stakeholders found the engagement process effective, with 75% of participants ranking it as either highly effective (25%) or somewhat effective (50%). This favorable perception highlights the significance attributed to stakeholder participation in

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

promoting project achievement and is consistent with prior studies that emphasize the crucial function of stakeholder engagement in project results.

The results also showed a favorable assessment of agile processes, with 50.98% of participants perceiving them as more efficient than conventional approaches. Nevertheless, the chi-square test outcome ($\chi^2 = 5.84$, $p = 0.054$) did not meet the standard threshold for statistical significance. This indicates a tendency towards success but emphasizes the need for additional empirical investigation, which may include larger sample sizes or alternative methodological techniques, to validate these initial results firmly.

Related to Research Questions and Problem Statement

The findings directly pertain to the research questions stated in the introduction chapter and the issue statement regarding the challenges faced by the affordable housing industry due to rising urbanization and economic inequities.

RQ1: What are the primary advantages of including stakeholders in agile project management for urban real estate affordable housing projects?

The evidence substantiates the claim that implementing agile techniques can result in superior project outcomes. It specifically addresses the research inquiry into the efficacy of agile approaches in enhancing stakeholder engagement in urban affordable housing projects. Agile techniques are known for their capacity to adapt and their iterative feedback systems, which make them ideal for improving stakeholder engagement. Stakeholder engagement is a crucial aspect of success in these initiatives.

RQ2: What is the stakeholders' vision for the future of engagement techniques in urban real estate affordable housing projects?

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

The results indicate a favorable pattern in stakeholders' involvement and the perceived efficiency of agile approaches. Stakeholders view stakeholder engagement as successful, demonstrating a readiness to maintain and potentially enhance engagement strategies in future endeavors.

RQ3: What variables impact the efficacy of stakeholder engagement strategies in agile project management for urban real estate affordable housing projects?

Project management experience, knowledge of agile approaches, and the frequency of their usage are important factors that significantly influence the effectiveness of stakeholder engagement strategies.

RQ4: Regarding agile project management for affordable housing initiatives in urban real estate, which approaches are suggested for integrating stakeholder feedback into the decision-making process?

The research indicates that tactics such as establishing frequent feedback loops, promoting openness, and maintaining open communication channels can successfully integrate stakeholder feedback into decision-making processes in agile project management for urban real estate affordable housing projects.

The findings address the problem statement regarding the difficulties in the affordable housing industry caused by rising urbanization and economic inequalities. Agile approaches, renowned for their flexibility and iterative feedback mechanisms, are ideal for improving stakeholder engagement—a crucial element for success in such initiatives. The evidence substantiates the claim that implementing agile techniques can result in superior project outcomes, explicitly addressing the research inquiry of the efficacy of agile approaches in enhancing stakeholder engagement in urban affordable housing projects.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Comparative Analysis with Existing Research

The positive evaluation of agile approaches in this study is consistent with the conclusions drawn from previous research. Johnson and Williams (2020) emphasized the adverse effects of insufficient stakeholder involvement on project expenses and delays, proposing that more proactive engagement tactics could help alleviate these problems. This study suggests that agile procedures, characterized by their flexibility and focus on stakeholders, can significantly improve collaboration and adaptation, decreasing risks related to inadequate stakeholder participation. Furthermore, the comparison to the results of Smith et al. (2021), who found that stakeholder participation was only 30% successful, highlights the possibility for agile approaches to produce superior results in specific circumstances. This disparity implies that the effective execution of agile approaches may rely heavily on specific organizational contexts or customized strategies that consider the housing sector's distinct constraints.

This comparison analysis strengthens the credibility of the current study's results and emphasizes the subtle circumstances under which agile approaches can be most efficient. It indicates the necessity to investigate how alternative approaches to implementing agile methods can affect project results in diverse circumstances within the urban affordable housing industry.

Implications

The results of this study provide valuable insights into various areas that require further investigation to further our comprehension of the implementation and consequences of agile approaches in urban affordable housing projects (Smith et al., 2021). The purpose of these research directions is not only to fill the gaps found in this study but also to increase the implementation of agile methods to improve stakeholder participation and project outcomes.

An important area for further study involves determining the obstacles that impede the implementation of agile approaches in the affordable housing industry (Johnson & Williams,

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

2020). Future research should investigate different obstacles, such as opposition within organizations, cultural difficulties, regulatory limitations, and inadequacies in agile-specific abilities among project teams. Gaining a thorough comprehension of these obstacles will enable the creation of specific tactics to encourage broader and more efficient adoption of agile methods. Furthermore, it is crucial to evaluate the efficacy of individual agile methodologies in achieving project success and engaging stakeholders (Jones & Jamieson, 2019). Subsequent studies should assess the influence of various agile tools and techniques, such as Scrum, Kanban, or Lean methodologies, specifically in urban affordable housing projects. These studies could concentrate on quantifying outcomes associated with project delivery durations, adherence to budget, satisfaction of stakeholders, and overall project excellence, offering empirical proof to inform the choice and execution of agile approaches.

Utilizing a combination of qualitative and quantitative research approaches would significantly enhance the outcomes of future investigations (Freeman, 1984). This strategy should combine quantitative methodologies, such as surveys and data analytics, with qualitative methods, such as interviews and case studies. An all-encompassing approach would enable researchers to capture both the quantifiable effects of agile processes and the subtle experiences and perspectives of project managers and stakeholders, providing a more profound comprehension of agile adoption in real-world scenarios.

In addition, longitudinal studies could provide valuable information regarding the lasting impacts of agile approaches on affordable housing projects (Johnson & Williams, 2020). These studies would monitor the advancement of projects across many stages or years, evaluating the impact of agile methods on long-term adaptability, the durability of stakeholder involvement, and the overall effectiveness of the project.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

It is crucial to investigate how agile approaches might be modified to suit various cultural and regulatory contexts in the urban affordable housing sector (Smith et al., 2021). Further investigation is needed to explore how agile methods might be tailored to suit the requirements and limitations of different geographical areas or demographic situations, guaranteeing that agile approaches are appropriately harmonized with local circumstances.

Examining the essential policy and organizational structures that facilitate the implementation of agile methodologies can offer practical knowledge to policymakers and senior executives (Jones & Jamieson, 2019). This research aims to determine the most effective methods for creating policy frameworks, training programs, and organizational structures that promote the successful implementation of agile methodologies in affordable housing projects, thereby maximizing their advantages. The purpose of these recommendations is to optimize the integration of stakeholder feedback and boost the overall efficacy of project management.

Project managers should incorporate regular feedback loops at various stages of the project's lifespan. Organized events, such as sprint reviews or feedback meetings conducted after each development phase, enable stakeholders to offer their input on the project's advancement and propose enhancements. In addition, utilizing digital tools that will allow instantaneous feedback guarantees the ongoing collection and rapid resolution of stakeholder input, enabling immediate modifications to the project plan as required.

In addition, project managers should create extensive training programs for their teams. These programs should encompass the core principles of agile methods and highlight the significance of stakeholder engagement, including the requisite skills for proficiently collecting and incorporating stakeholder feedback. Creating unambiguous and easily understood communication channels is essential for upholding stakeholder confidence and engagement. Project managers must ensure

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

that all communications on project changes, updates, and decisions are easily accessible to all stakeholders through a dedicated project portal or regular update newsletters.

Policymakers can facilitate the integration of agile methodologies into public housing projects by developing policies that encourage their adoption. These rules may incorporate rewards for initiatives that showcase efficient stakeholder involvement and accomplished agile execution. Promoting collaborations between governmental organizations and private companies specialized in agile approaches can facilitate exchanging knowledge and implementing effective strategies. These collaborations offer significant educational opportunities for project teams in the public sector and aid in integrating agile principles into public projects.

Limitations

This study recognizes and admits several constraints and shortcomings. The presence of geographic limitations in research, such as Davison, Han, and Liu's (2017) Australian case studies and Malik, Roosli, and Yusof's (2022) conceptual framework, may restrict the capacity to apply the findings to a broader context. The study acknowledges that the chosen literature may not encompass recent advancements or emerging patterns. Differences in the quality and rigor of the selected articles, such as examining the affordable housing issue conducted by the Urban Housing Report (2020), may affect the overall validity.

Following that will be an examination of the theoretical framework and a comprehensive analysis of existing empirical research. The framework comprises Stakeholder Theory (Freeman, 1984), Institutional Stakeholder Collaborations (ISCs) (Malik et al., 2022), and Social Network Analysis (SNA) (Xu et al., 2020). The literature study encompasses five essential themes: the pertinence of agile project management, the significance of stakeholder engagement, collaborative frameworks, perception and opposition, community engagement, and research gaps. The purpose of our

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

research is to fill the gaps that have been discovered and improve the procedures for engaging stakeholders in urban affordable housing projects.

Another issue is the dependence on self-reported data, which might create response biases such as social desirability or recollection bias. Respondents may exhibit response bias by providing answers they perceive as socially desirable or encountering difficulties in accurately recollecting past events or perceptions. This constraint may have impacted the results by compromising the precision and reliability of the gathered data, potentially resulting in skewed outcomes or misreading.

Furthermore, the narrow focus of the research on stakeholder participation in agile project management for urban real estate affordable housing projects may restrict the applicability of the results to different contexts or industries. Urban real estate affordable housing projects are characterized by distinct issues and stakeholders that may not represent other projects or industries. Consequently, the study's conclusions may have restricted relevance outside this situation.

Various measures were implemented throughout the research procedure to minimize the possible impact of these constraints on the results. The survey instruments and interview techniques were carefully designed to mitigate response biases by employing clear and neutral language and offering response alternatives encompassing various opinions. In addition, validation procedures were put in place to guarantee the dependability and accuracy of the data gathered. These procedures included conducting pilot tests on survey equipment and cross-referencing data from various sources.

In addition, the research design utilized various sampling approaches to improve the sample's representativeness and raise the chances of obtaining a wide range of perspectives and experiences. The study sought to gather a wide range of perspectives and minimize the influence of biased

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

sampling by involving professionals with different knowledge and skills in project management and affordable housing.

Conclusion

The results of this study are highly relevant in the context of modern urban development, especially considering a growing affordable housing issue caused by rapid urbanization and economic inequalities. This study highlights the efficacy of agile project management approaches in enhancing stakeholder participation, providing practical insights that can immediately alleviate these issues. The favorable consequences of these discoveries are significant, facilitating the implementation of more effective and adaptable administration of housing projects that correspond to the ever-changing requirements of urban populations. Nevertheless, adopting agile processes may encounter opposition from stakeholders accustomed to conventional approaches, presenting a potential obstacle that requires strategic management.

The research focuses on the urgent requirement to improve stakeholder involvement in urban affordable housing initiatives, directly addressing the stated problem. The findings satisfactorily address the study questions by demonstrating the advantages of agile approaches, predicting future engagement practices, highlighting elements that impact engagement success, and proposing solutions for incorporating stakeholder feedback. The remarkable flexibility of agile methods in accommodating quickly changing project requirements and their capacity to promote a collaborative atmosphere are emphasized.

This study proves that agile project management approaches extensively enhance stakeholder engagement in urban real estate affordable housing projects. These techniques improve communication, boost adaptability, and efficiently integrate stakeholder feedback into the project management process. By addressing both the practical and human elements of urban housing

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

projects, these enhancements increase the likelihood of achieving effective project results and increasing stakeholder satisfaction.

This research has significant consequences for stakeholders, such as project managers, community organizations, lawmakers, and urban inhabitants. By embracing agile approaches, project managers can achieve greater effectiveness and efficiency in project execution. Neighborhood organizations and officials can utilize these findings to support and implement housing solutions that more closely match neighborhood needs. Ultimately, inhabitants will benefit from housing projects that are better suited to their requirements and delivered more efficiently.

It is advisable to utilize models and tools to optimize the implementation of agile approaches in urban housing projects. Urban planners are recommended to use the Scrum framework to enhance flexibility and expedite adjustments by employing iterative cycles and obtaining regular stakeholder feedback. Utilizing Kanban boards may enhance project visibility and communication, facilitating the monitoring of progress and efficient task management. In addition, applying Lean concepts can reduce waste and prioritize operations that bring value, thereby assuring efficient resource usage in housing projects.

Subsequent investigations should expand the range of this study to investigate the use of agile approaches in different categories of housing projects and varied geographical and cultural settings. Longitudinal studies have the potential to offer a more profound understanding of the lasting impacts of agile approaches on project success and stakeholder satisfaction. Furthermore, incorporating sophisticated technical tools into agile project management might significantly improve stakeholder involvement and project visibility, creating opportunities for innovation in housing project management.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Ultimately, this research emphasizes the significant capacity of agile project management to tackle crucial obstacles in urban real estate affordable housing projects. Agile approaches offer a possible answer to urgent difficulties in urban development by promoting more stakeholder engagement. Further investigation and application should utilize these discoveries to improve and broaden the implementation of agile methodologies to achieve fair and efficient solutions for urban housing.

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Appendices

Appendix A: Statistical Analysis Outputs

Appendix A of the research article contains comprehensive documentation and results of the statistical analyses performed on the survey data. Including this appendix is essential for providing evidence to support the findings presented in the results section and ensuring clarity regarding the analytical techniques utilized. Below is a comprehensive analysis of the contents of Appendix A:

1. Description of Statistical Methods

Statistical Tests Overview: This is a comprehensive explanation of each statistical test utilized in the analysis, encompassing chi-square tests for categorical data, t-tests or ANOVA for continuous data (if applicable), and any additional special tests employed.

Test Selection Rationale: Justification for choosing each test, considering the nature of the data and the specific hypotheses under investigation.

2. Data Preparation and Processing

Data Cleaning Steps: This section explains the procedures used to prepare the data for analysis. It includes the methods used to address missing values, outliers, and any data transformations that were done.

Coding of Variables: Elaborate elucidation of the numerical coding process for survey replies, specifically for categorical data necessitating chi-square testing.

3. Elaborate Test Results

The Chi-Square Test analyzes the relationship between Agile Usage and Engagement Effectiveness.

Calculation Details: - Frequencies of reactions that were observed.

Expected frequencies assuming the null hypothesis is accurate.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

The chi-square statistic is calculated using the formula $\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$, where (O_i) and (E_i) represent the observed and predicted frequencies, respectively.

Degrees of freedom: The calculation is performed by multiplying the number of rows minus one by the number of columns minus one.

The p-value is a measure resulting from the chi-square test that represents the likelihood of witnessing the given data if the null hypothesis were correct.

Interpretation refers to a contextual understanding of the results of the study questions.

4. Tables and Figures

Chi-Square Tables: These tables display the frequencies seen and expected for the analyzed survey items and the residuals, representing the discrepancies between the observed and predicted values.

Summary tables provide a concise overview of critical statistical parameters from all conducted tests, such as test statistics, degrees of freedom, and p-values.

Diagnostic plots are visual tools for verifying assumptions or further investigating the data. Examples include histograms, which assess the data's distribution, and scatter plots, which examine the assumption of linearity.

5. Utilized Software and Tools

Statistical program: Specify the program or tools utilized for statistical analysis, such as SPSS, R, or Python.

Scripts or Commands: If appropriate, please include the precise scripts or command lines utilized to execute the statistical tests, as this information is vital for replication studies.

6. Presumptions and Constraints

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Assess Assumptions: Examine any assumptions made by the statistical tests employed, such as the assumption of independence of observations for chi-square tests.

Analysis Limitations: Any constraints in the statistical analysis that may impact the interpretation of the findings, such as limited sample numbers or bias due to non-response.

[Appendix B: Informed Consent Form](#)

Study Title: "Stakeholder Engagement in Urban Affordable Housing Projects: Perceptions, Practices, and Strategies"

Researcher: Tran Pham

Welcome to the research study!

I am a master's degree student at Harrisburg University of Science and Technology. I am interested in understanding "Best Practices to Increase Stakeholder Engagement in Agile Project Management for Urban Real Estate Affordable Housing Projects." Additionally, this research has been approved by the Institutional Review Board of Harrisburg University. You will be presented with information relevant to "Best Practices to Increase Stakeholder Engagement in Agile Project Management for Urban Real Estate Affordable Housing Projects" and asked to answer some questions about it. Please be assured that your responses will be kept entirely confidential.

The study should take you around 30 minutes to complete. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you want to contact me, I can be reached at tpham8@my.harrisburgu.edu.

By clicking the button below, you acknowledge that your participation in the study is voluntary, that you are 18 years of age, and that you are aware that you may choose to terminate your participation at any time and for any reason.

Please note that this survey is best displayed on a laptop or desktop. Some features may not be compatible with a mobile device.

- I consent to begin the study.
- I do not consent; I do not wish to participate.

Appendix C: Definition of Terms

Stakeholder Engagement: The process of actively involving individuals, organizations, or groups with a vested interest or impacted by a specific project or endeavor. Frequently, it necessitates exchanging information, making joint efforts, and seeking advice to consider their concerns (Freeman, 1984).

Affordable Housing Crisis: An urban scenario marked by a dearth of reasonably priced housing alternatives for individuals and families with low to moderate incomes. The dilemma arises primarily due to escalating housing expenses and inadequate affordable housing options (Desmond, 2016).

Agile Project Management: A project management method prioritizes collaboration, adaptability, and client input. Its flexibility and iterative nature characterize it. It is frequently used in software development and implemented in other sectors, such as real estate (Highsmith, 2001).

Cost Overruns: Circumstances in which a project's actual expenses surpass the initially allocated or expected expenses. Exceeding the budget might lead to financial difficulties and cause delays in finishing the project (Flyvbjerg et al., 2003).

Social Inequality: Social, economic, and educational inequalities among various societal groups, sometimes influenced by characteristics such as income, race, or gender (Wilkinson & Pickett, 2009).

Backlog of Affordable Housing Units: A backlog or accumulation of demand for affordable housing refers to the situation where affordable housing is scarce, preventing individuals and families that need it from being able to obtain it (Desmond, 2016).

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Project Delays: Prolonging the project timetable beyond the first scheduled deadline. Delays can arise due to various circumstances, such as stakeholder concerns, regulatory obstacles, or unanticipated difficulties (Flyvbjerg et al., 2003).

Urbanization: The phenomenon of population growth and the movement of people from rural to urban regions, leading to the establishment of cities and enhanced urban development (United Nations, 2018).

Meaningful Stakeholder Engagement: Stakeholder involvement is beyond tokenism and entails actively incorporating stakeholders in decision-making processes, appreciating their opinions, and addressing their concerns (Grunig, 1992).

Equitable Housing Solutions: Housing solutions that strive to ensure equitable and unbiased access to affordable housing for individuals and communities, irrespective of their socio-economic status (Desmond, 2016).

Social Network Analysis: The study of relationships and interactions among stakeholders, typically depicted as a network graph, to comprehend patterns of influence and collaboration (Wasserman & Faust, 1994).

Institutional Stakeholder Collaborations (ISCs) are collaborative endeavors encompassing multiple institutions and organizations working together to tackle housing-related difficulties. This notion underscores the significance of various stakeholders working together to achieve efficacious solutions (Malik et al., 2022).

Community Organizations: Non-profit or grassroots organizations focus on addressing community problems and advocating for citizens' interests at the local level, particularly in the context of affordable housing developments.

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Government Agencies: Public bodies, which can be found at several levels of government, such as municipal, state, and federal, are responsible for creating policies, regulating, and implementing programs linked to housing and urban development (Gerring, 2012).

Housing Studies: Housing studies is a multidisciplinary area of research and analysis that examines various aspects of housing, such as affordability, housing policy, and the dynamics of the housing market (Kemeny, 2005).

Quantitative Analysis: The research process referred to as quantitative research comprises the collection and analysis of numerical data to derive statistical findings and make judgments based on the facts (Johnson & Williams, 2020).

Survey Study: The research methodology involves using standardized questionnaires or surveys to gather data from individuals or organizations and obtain insights and opinions on specific issues (Smith et al., 2021).

Social Housing: The government provides publicly owned or subsidized housing units or programs to low-income people and families at lower rental rates (Smith et al., 2021).

Social Housing Policy: Social housing programs are subject to government laws and regulations that dictate their availability, management, and the criteria for eligibility (Malpezzi & Mayo, 1997).

Housing Development: The process of constructing or renovating residential communities or buildings to develop new housing units or enhance pre-existing ones (Hui & Zhang, 2019).

Housing Supply: Housing supply refers to the total number of housing units available in a specific housing market, encompassing rental and ownership choices (Hui & Zhang, 2019).

Housing Market Dynamics: The determinants and dynamics that impact the availability, desire, and cost of housing in a particular geographical region (Glaeser & Gyourko, 2003).

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

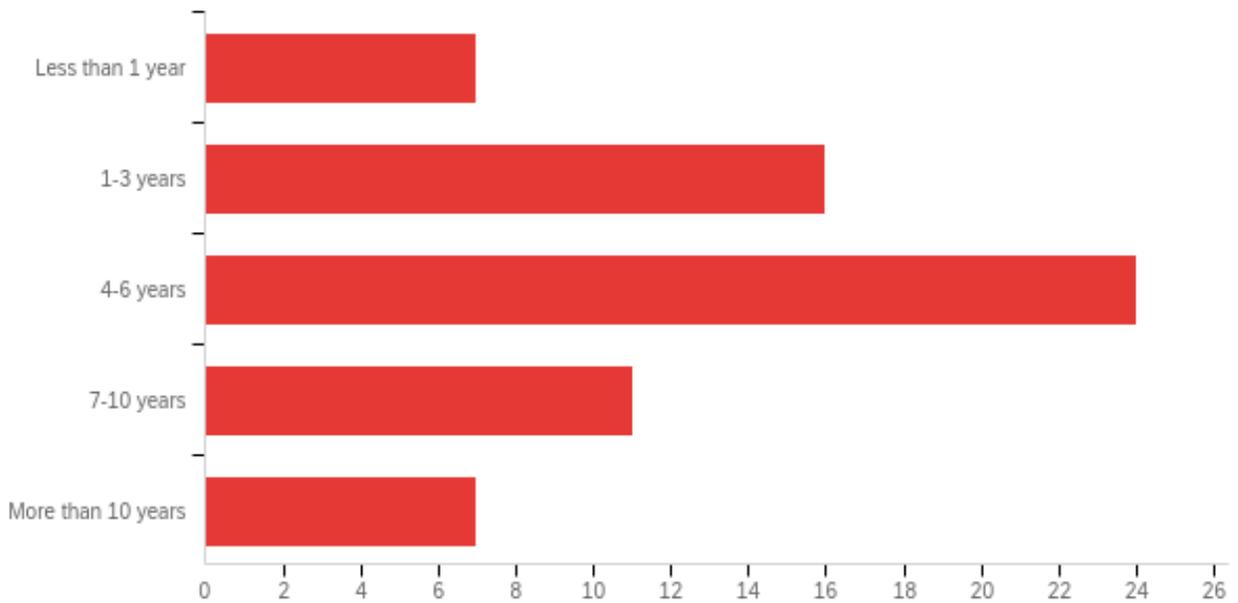
Housing Crisis Research: The objective of academic and applied research is to gain insight into the factors, outcomes, and possible remedies for housing affordability and availability in metropolitan regions (Desmond, 2016).

Secure Housing: Stable and long-term housing refers to living arrangements that protect individuals and families from eviction or displacement (Desmond, 2016).

Community Engagement: Engaging residents and community stakeholders in decision-making processes and activities that impact their communities and overall well-being (Arnstein, 1969).

Questionnaires/ Results

Q1 - How many years of experience do you have in project management?

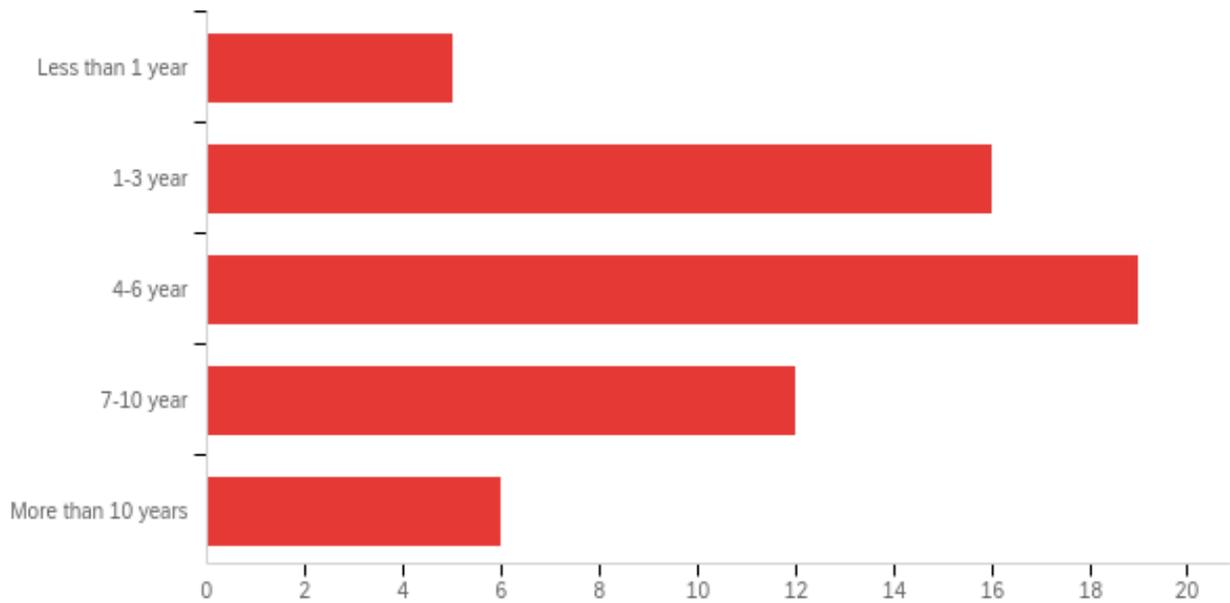


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How many years of experience do you have in project management?	1.00	5.00	2.92	1.13	1.27	65

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

#	Answer	%	Count
1	Less than one year	10.77%	7
2	1-3 years	24.62%	16
3	4-6 years	36.92%	24
4	7-10 years	16.92%	11
5	More than ten years	10.77%	7
	Total	100%	65

Q2 - How many years of experience do you have in affordable housing?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How many years of experience do you have in affordable housing?	1.00	5.00	2.97	1.11	1.24	58

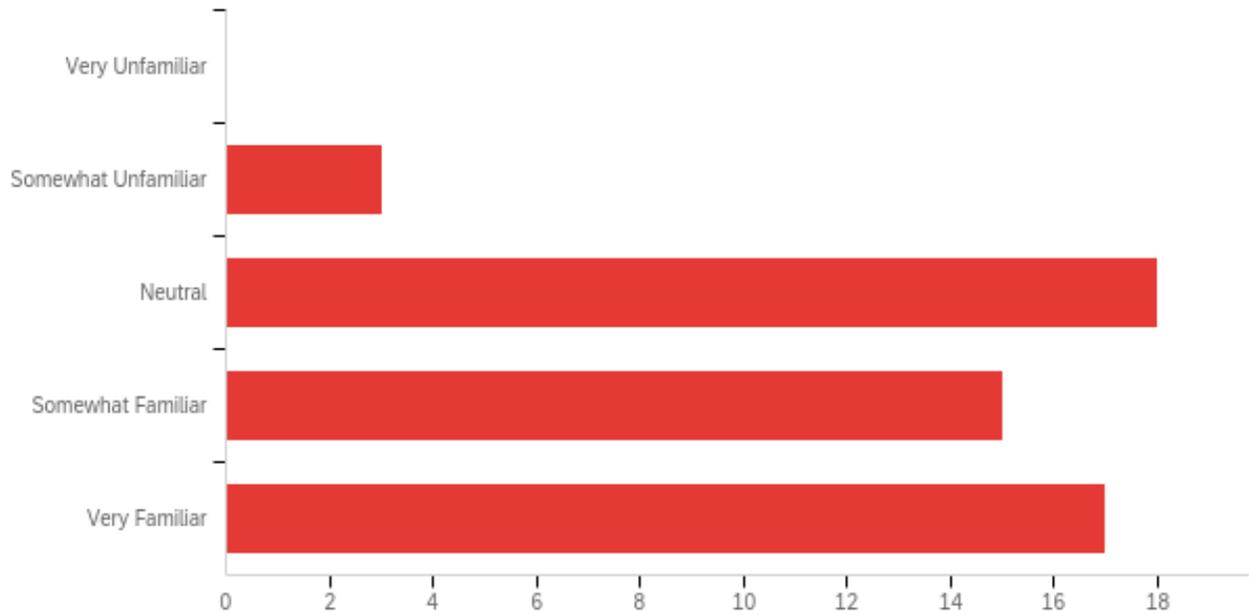
#	Answer	%	Count
1	Less than one year	8.62%	5
2	1-3 year	27.59%	16

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

3	4-6 year	32.76%	19
4	7-10 year	20.69%	12
5	More than ten years	10.34%	6
	Total	100%	58

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q3 - How familiar are you with agile project management methodologies?

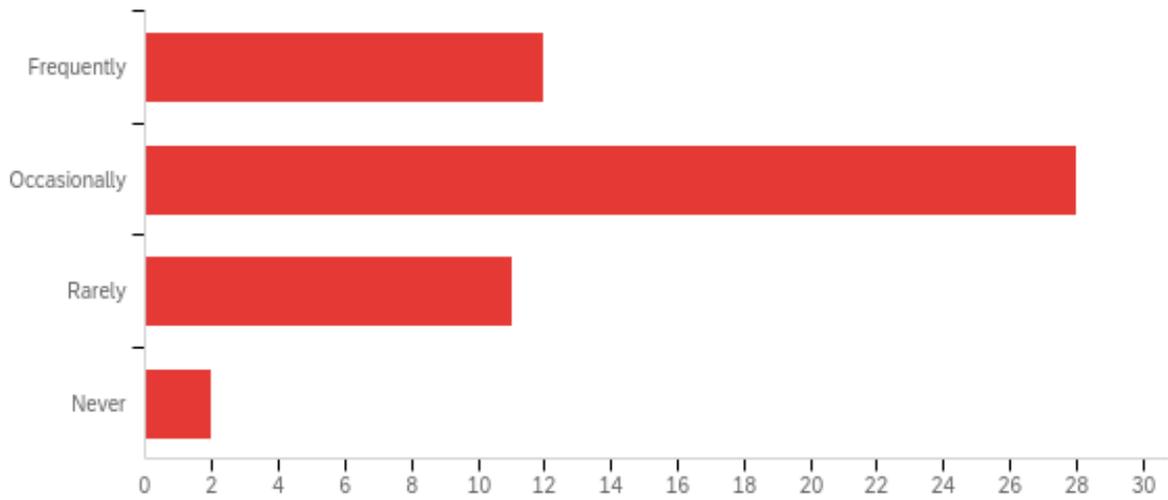


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How familiar are you with agile project management methodologies?	2.00	5.00	3.87	0.93	0.87	53

#	Answer	%	Count
1	Very Unfamiliar	0.00%	0
2	Somewhat Unfamiliar	5.66%	3
3	Neutral	33.96%	18
4	Somewhat Familiar	28.30%	15
5	Very Familiar	32.08%	17
	Total	100%	53

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q4 - How often do you use agile project management methodologies in your housing projects?

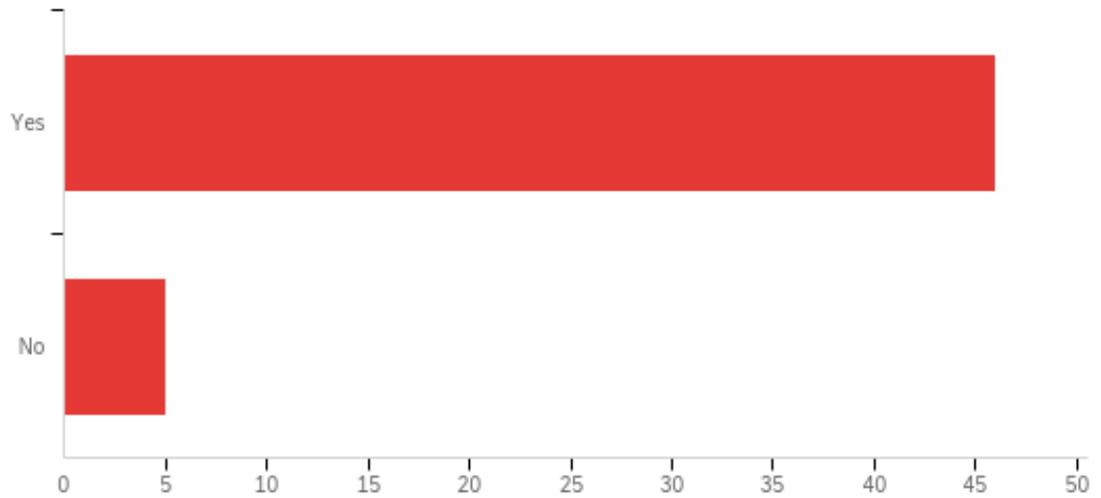


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How often do you use agile project management methodologies in your housing projects?	1.00	4.00	2.06	0.76	0.58	53

#	Answer	%	Count
1	Frequently	22.64%	12
2	Occasionally	52.83%	28
3	Rarely	20.75%	11
4	Never	3.77%	2
	Total	100%	53

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q5 - Have you previously worked on urban real estate affordable housing projects?

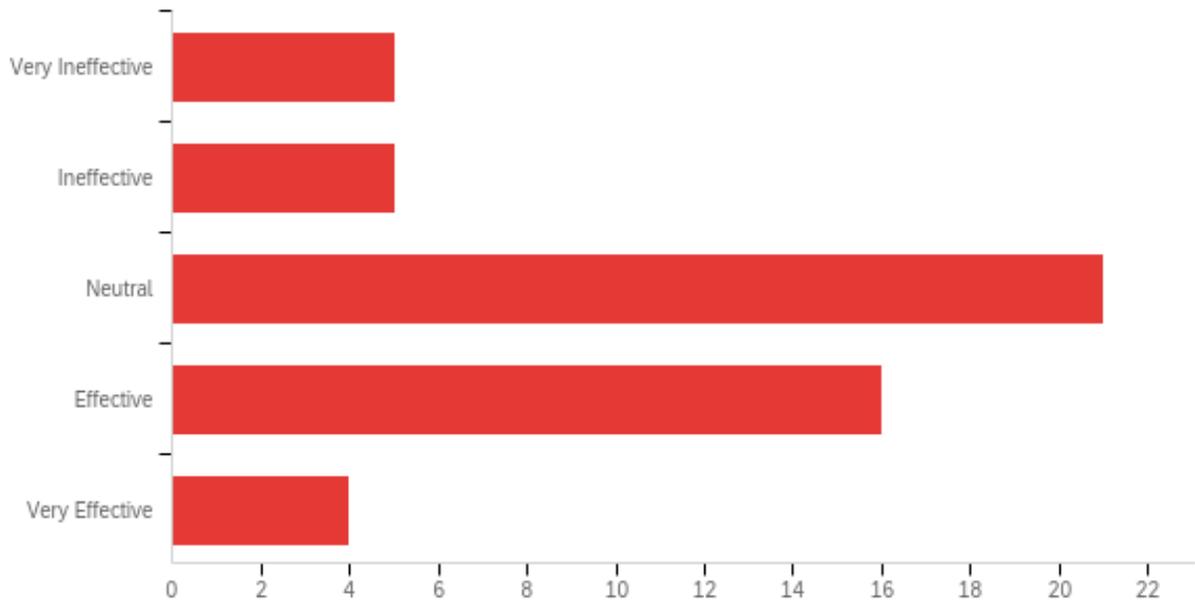


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Have you worked on urban real estate affordable housing projects in the past?	1.00	2.00	1.10	0.30	0.09	51

#	Answer	%	Count
1	Yes	90.20%	46
2	No	9.80%	5
	Total	100%	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q6 - How would you rate the effectiveness of stakeholder engagement in your past urban housing projects?

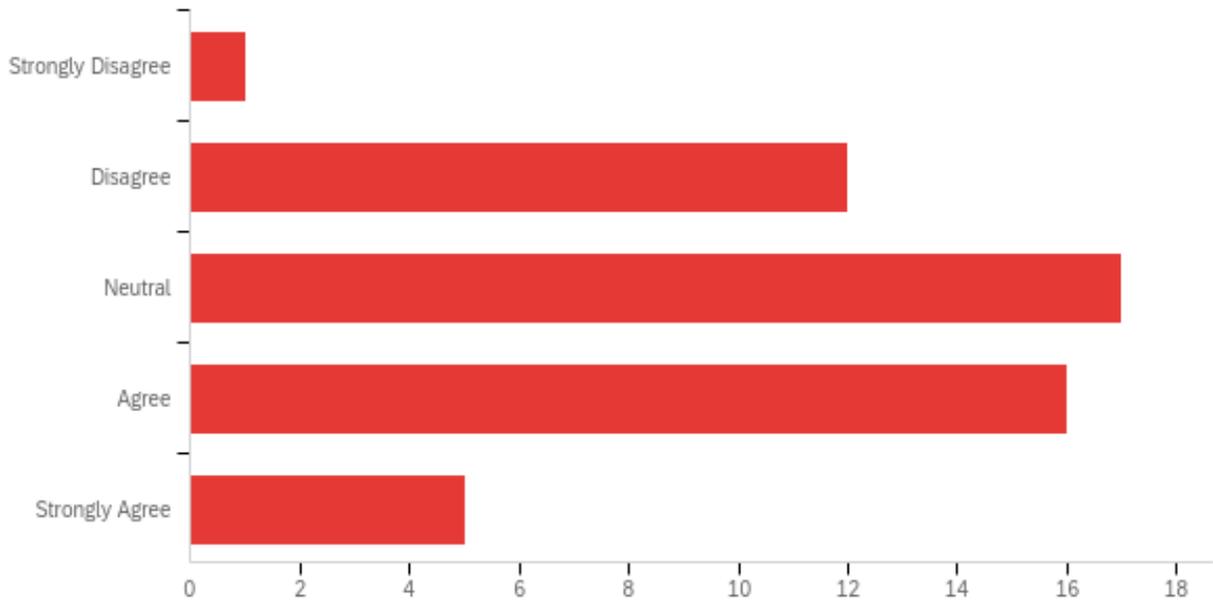


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How would you rate the effectiveness of stakeholder engagement in your past urban housing projects?	1.00	5.00	3.18	1.04	1.09	51

#	Answer	%	Count
1	Very Ineffective	9.80%	5
2	Ineffective	9.80%	5
3	Neutral	41.18%	21
4	Effective	31.37%	16
5	Very Effective	7.84%	4
	Total	100%	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

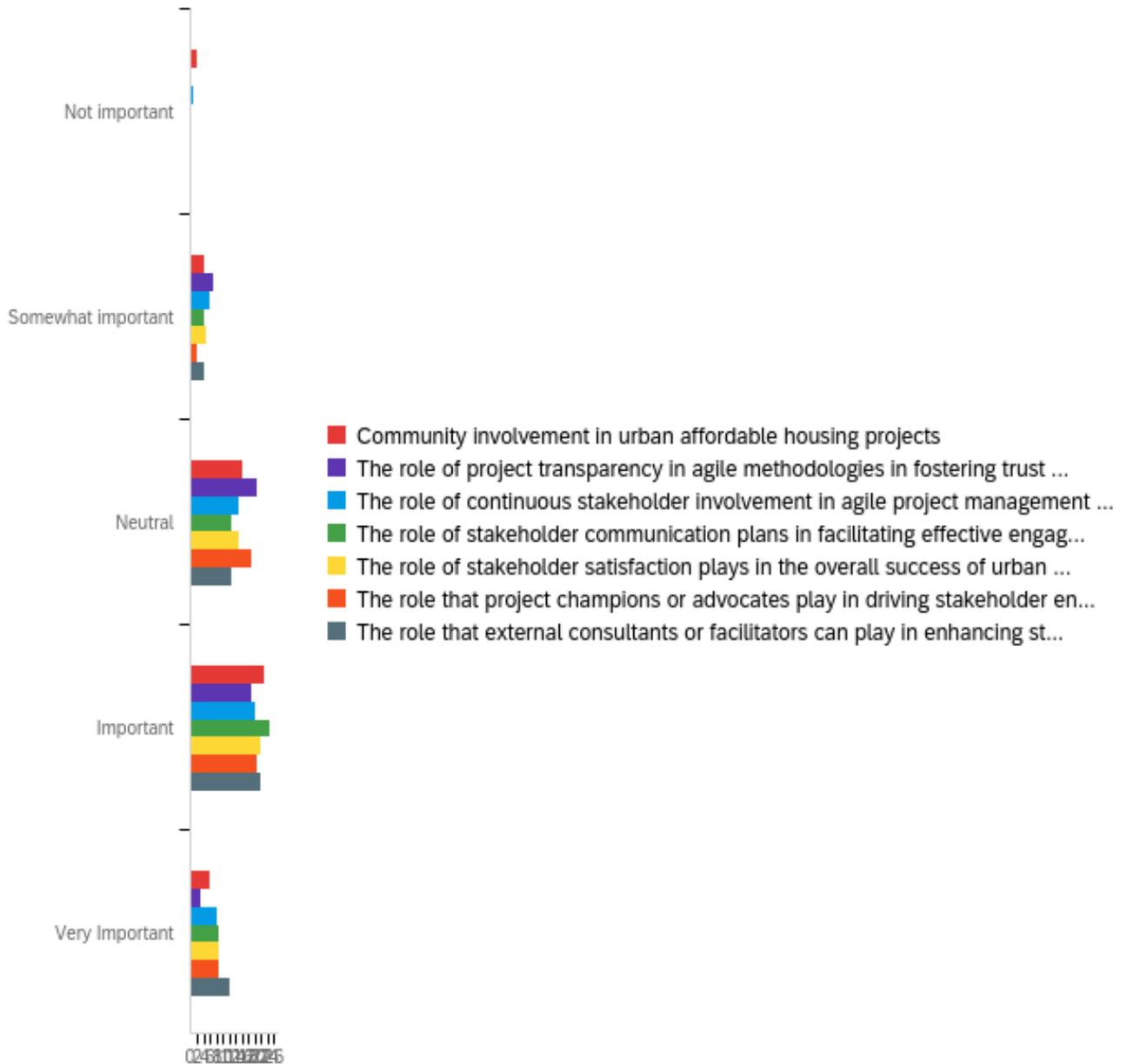
Q7 - To what extent do you agree with the statement below?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Stakeholder engagement is crucial for the success of urban real estate affordable housing projects.	1.00	5.00	3.24	0.98	0.96	51

#	Answer	%	Count
1	Strongly Disagree	1.96%	1
2	Disagree	23.53%	12
3	Neutral	33.33%	17
4	Agree	31.37%	16
5	Strongly Agree	9.80%	5
	Total	100%	51

Q8 - To what extent do you think about the matter's importance?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Community involvement in urban affordable housing projects	1.00	5.00	3.53	0.94	0.88	51
2	The role of project transparency in agile methodologies in fostering	2.00	5.00	3.36	0.79	0.63	50

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

	trust and collaboration among stakeholders										
3	The role of continuous stakeholder involvement in agile project management in ensuring project success	1.00	5.00	3.56	0.96	0.93	50				
4	The role of stakeholder communication plans in facilitating effective engagement in urban real estate affordable housing projects managed with agile methodologies	2.00	5.00	3.76	0.83	0.69	51				
5	The role stakeholder satisfaction plays in the overall success of urban real estate affordable housing projects managed with agile methodologies.	2.00	5.00	3.69	0.87	0.76	51				
6	The role that project champions or advocates play in driving stakeholder engagement and project success in urban real estate affordable housing projects managed with agile methodologies.	2.00	5.00	3.73	0.79	0.63	51				
7	The role that external consultants or facilitators can play in enhancing stakeholder engagement efforts within agile project management for urban real estate affordable housing projects.	2.00	5.00	3.82	0.88	0.77	51				

#	Question	Not important	Somewhat important	Neutral	Important	Very Important	Total
1	Community involvement in urban	3.92% 2	7.84% 4	31.37% 16	45.10% 23	11.76% 6	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

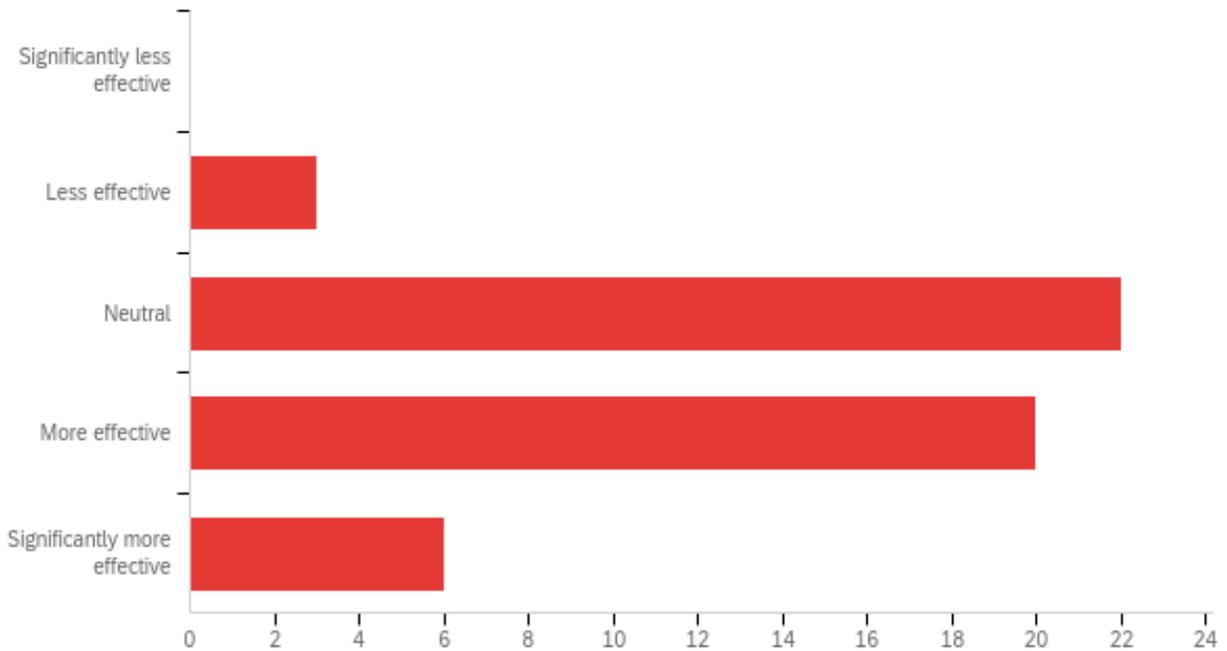
	affordable housing projects											
2	The role of project transparency in agile methodologies in fostering trust and collaboration among stakeholders	0.00%	0	14.00%	7	42.00%	21	38.00%	19	6.00%	3	50
3	The role of continuous stakeholder involvement in agile project management in ensuring project success	2.00%	1	12.00%	6	30.00%	15	40.00%	20	16.00%	8	50
4	The role of stakeholder communication plans in facilitating effective engagement in urban real estate affordable housing projects managed with agile methodologies	0.00%	0	7.84%	4	25.49%	13	49.02%	25	17.65%	9	51
5	The role of stakeholder satisfaction plays in the overall success of	0.00%	0	9.80%	5	29.41%	15	43.14%	22	17.65%	9	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

	urban real estate affordable housing projects managed with agile methodologies.											
6	The role that project champions or advocates play in driving stakeholder engagement and project success in urban real estate affordable housing projects managed with agile methodologies.	0.00%	0	3.92%	2	37.25%	19	41.18%	21	17.65%	9	51
7	The role that external consultants or facilitators can play in enhancing stakeholder engagement efforts within agile project management for urban real estate affordable housing projects.	0.00%	0	7.84%	4	25.49%	13	43.14%	22	23.53%	12	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q9 - How do you perceive the role of agile project management methodologies in enhancing stakeholder engagement compared to traditional project management approaches?

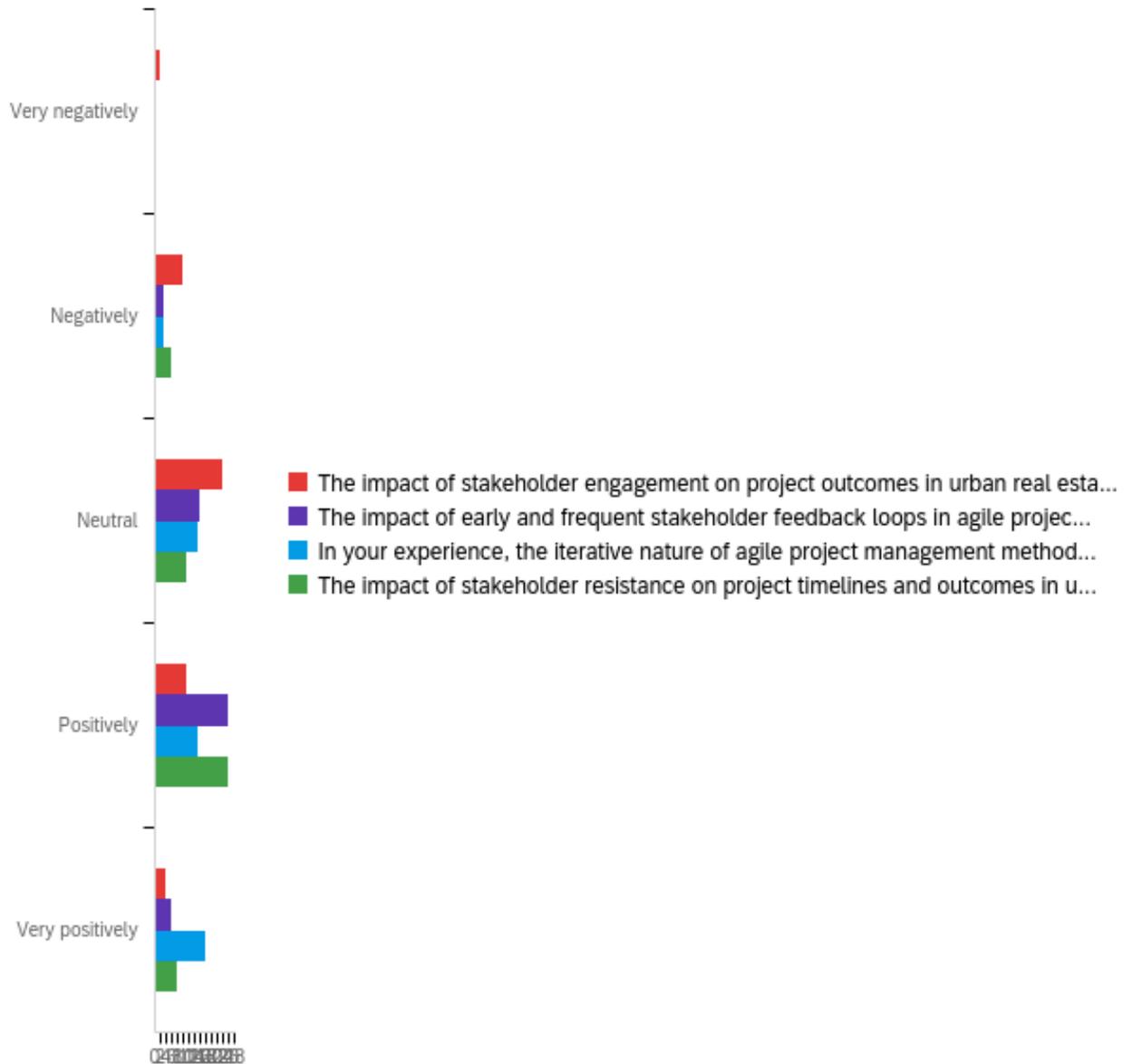


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you perceive the role of agile project management methodologies in enhancing stakeholder engagement compared to traditional project management approaches?	2.00	5.00	3.57	0.77	0.60	51

#	Answer	%	Count
1	Significantly less effective	0.00%	0
2	Less effective	5.88%	3
3	Neutral	43.14%	22
4	More effective	39.22%	20
5	Significantly more effective	11.76%	6
	Total	100%	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q10 - To what extent would you perceive the below matter?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	The impact of stakeholder engagement on project outcomes in urban real estate affordable housing projects	1.00	5.00	3.10	0.93	0.87	51
2	The impact of early and frequent stakeholder feedback loops in agile projects	2.00	5.00	3.69	0.75	0.57	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

	project management on project outcomes.										
3	In your experience, the iterative nature of agile project management methodologies influences stakeholder engagement throughout the project lifecycle.	2.00	5.00	3.94	0.94	0.88	51				
4	The impact of stakeholder resistance on project timelines and outcomes in urban real estate affordable housing projects managed with agile methodologies.	2.00	5.00	3.71	0.87	0.76	51				

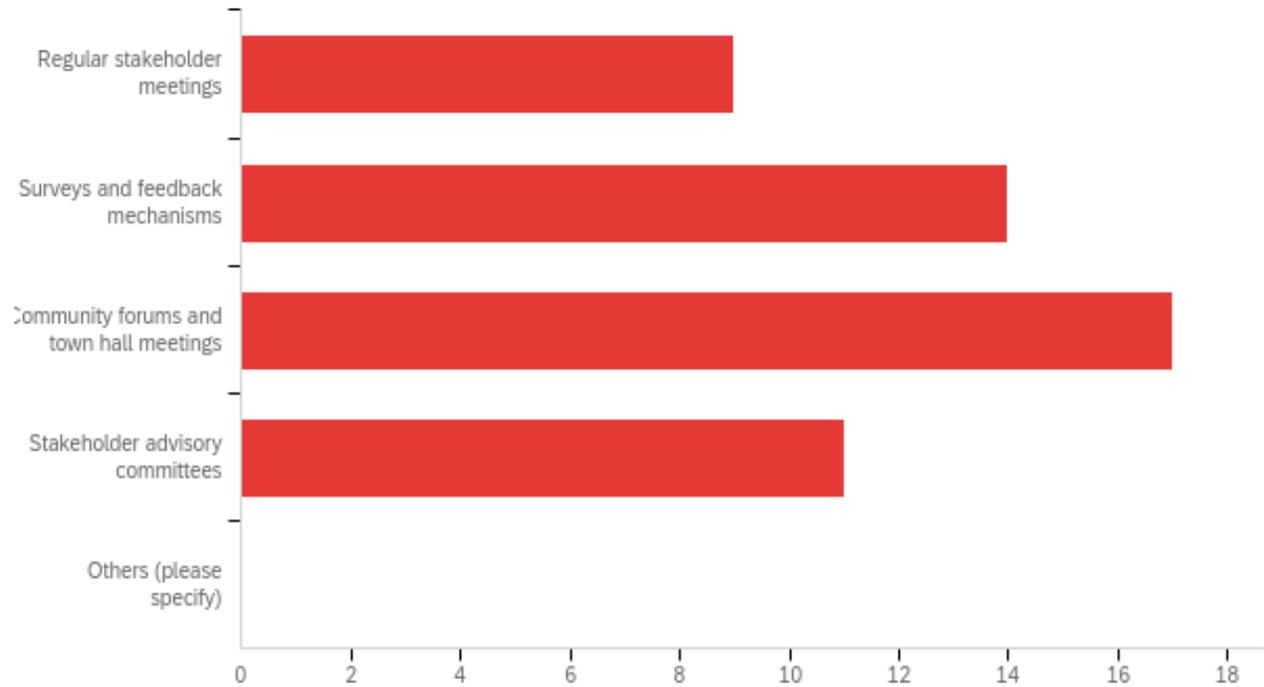
#	Question	Very negative ly	Negative ly	Neutr al	Positive ly	Very positive ly	Tot al
1	The impact of stakeholder engagement on project outcomes in urban real estate affordable housing projects	3.92% 2	19.61% 10	47.06% 24	21.57% 11	7.84% 4	51
2	The impact of early and frequent stakeholder feedback loops in agile project management on project outcomes.	0.00% 0	5.88% 3	31.37% 16	50.98% 26	11.76% 6	51
3	In your experience, the iterative nature of	0.00% 0	5.88% 3	29.41% 15	29.41% 15	35.29% 18	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

	agile project management methodologies influences stakeholder engagement throughout the project lifecycle.											
4	The impact of stakeholder resistance on project timelines and outcomes in urban real estate affordable housing projects managed with agile methodologies.	0.00%	0	11.76%	6	21.57%	11	50.98%	26	15.69%	8	51

Q11 - How do you rank the effectiveness of the following stakeholder engagement strategies in agile project management for urban real estate affordable housing projects?

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

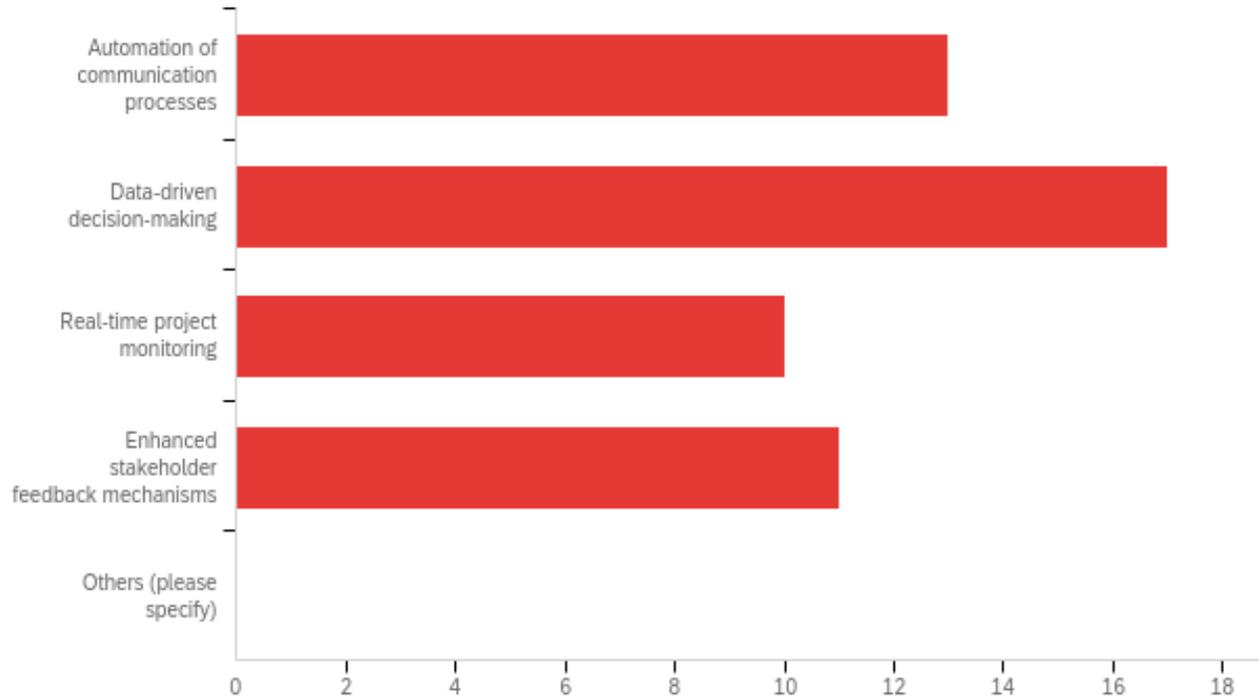


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rank the effectiveness of the following stakeholder engagement strategies in agile project management for urban real estate affordable housing projects? - Selected Choice	1.00	4.00	2.59	1.01	1.03	51

#	Answer	%	Count
1	Regular stakeholder meetings	17.65%	9
2	Surveys and feedback mechanisms	27.45%	14
3	Community forums and town hall meetings	33.33%	17
4	Stakeholder advisory committees	21.57%	11
5	Others (please specify)	0.00%	0
	Total	100%	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q12—How do you envision integrating technology or data analytics to improve stakeholder engagement practices, specifically in urban real estate affordable housing projects?



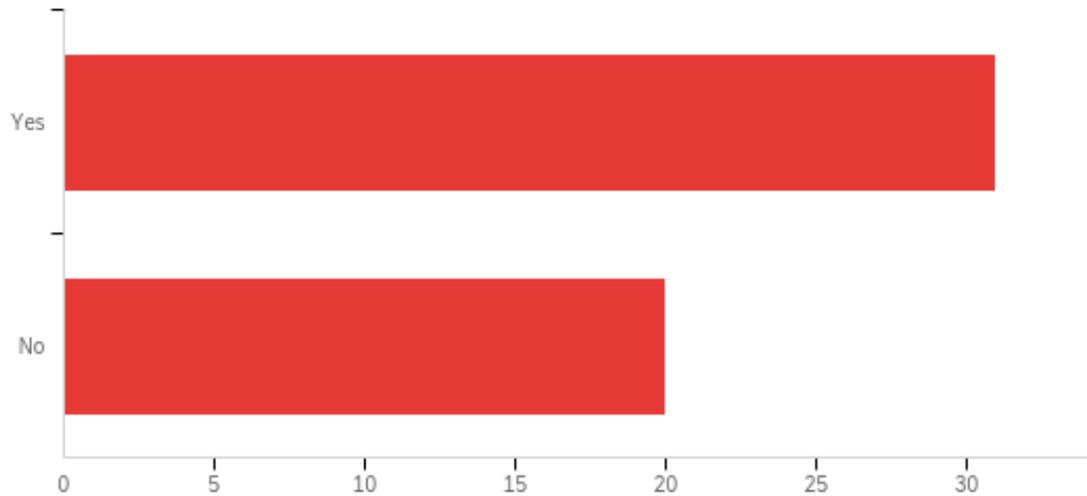
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you envision integrating technology or data analytics to improve stakeholder engagement practices in urban real estate affordable housing projects? - Selected Choice	1.00	4.00	2.37	1.08	1.17	51

#	Answer	%	Count
1	Automation of communication processes	25.49%	13
2	Data-driven decision-making	33.33%	17
3	Real-time project monitoring	19.61%	10
4	Enhanced stakeholder feedback mechanisms	21.57%	11

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

5	Others (please specify)	0.00%	0
	Total	100%	51

Q13 - Are there any regulatory or policy changes you believe would enhance stakeholder engagement in agile project management for urban real estate affordable housing projects?

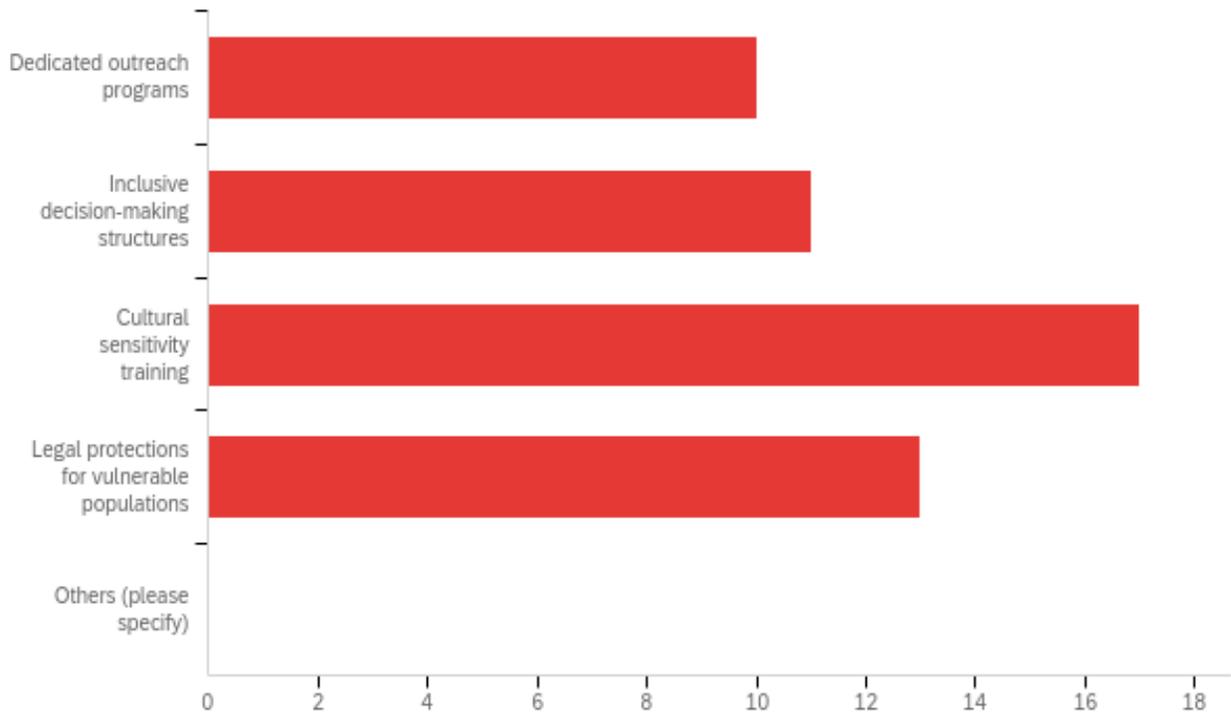


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Are there any regulatory or policy changes you believe would enhance stakeholder engagement in agile project management for urban real estate affordable housing projects?	1.00	2.00	1.39	0.49	0.24	51

#	Answer	%	Count
1	Yes	60.78%	31
2	No	39.22%	20
	Total	100%	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

Q14 - What measures can be taken to ensure equitable stakeholder engagement in urban real estate affordable housing projects, particularly for marginalized communities?



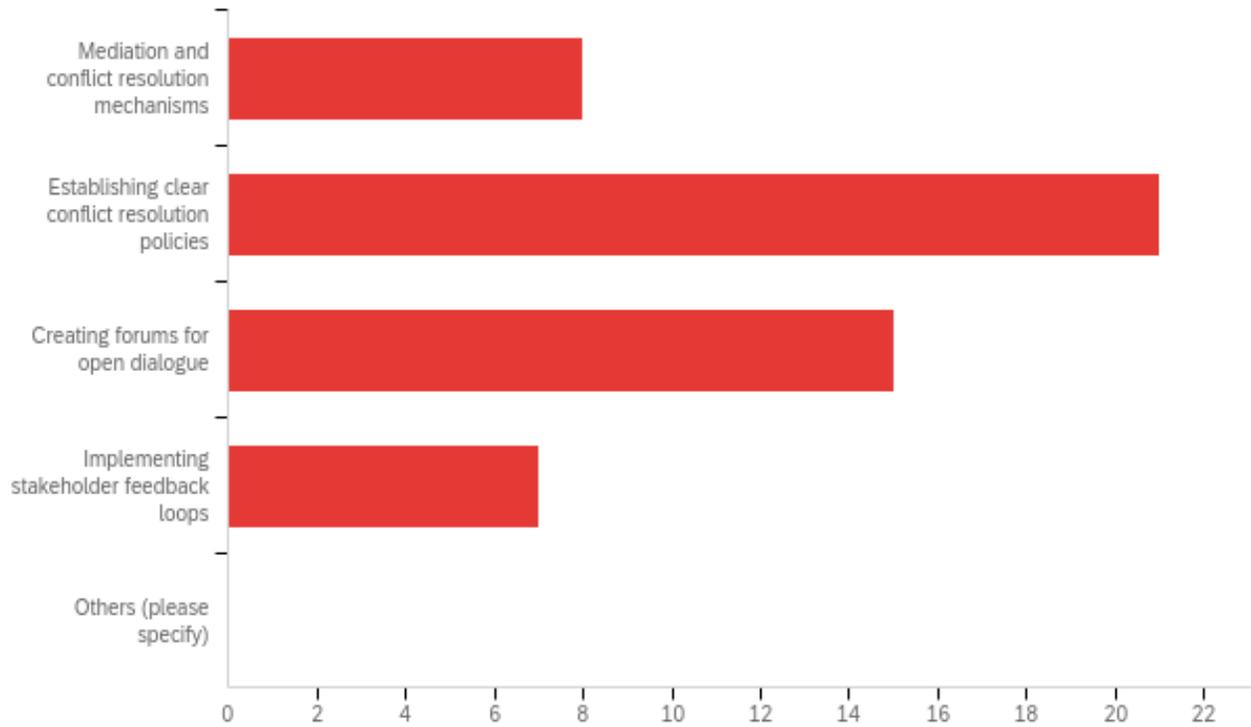
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What measures can ensure equitable stakeholder engagement in urban real estate affordable housing projects, particularly for marginalized communities? - Selected Choice	1.00	4.00	2.65	1.06	1.13	51

#	Answer	%	Count
1	Dedicated outreach programs	19.61%	10
2	Inclusive decision-making structures	21.57%	11
3	Cultural sensitivity training	33.33%	17
4	Legal protections for vulnerable populations	25.49%	13

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

5	Others (please specify)	0.00%	0
	Total	100%	51

Q15 - What strategies do you propose for effectively managing conflicts among stakeholders in urban real estate affordable housing projects?



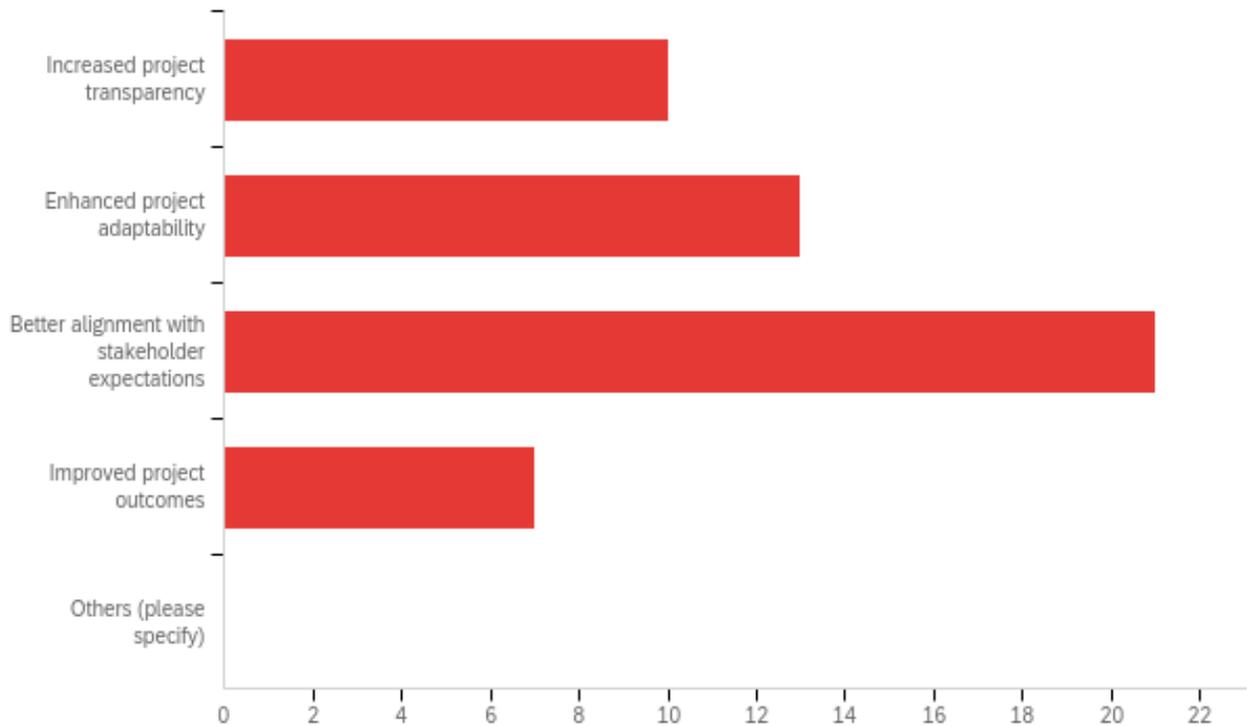
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What strategies do you propose to effectively manage stakeholders' conflicts in urban real estate affordable housing projects? - Selected Choice	1.00	4.00	2.41	0.91	0.83	51

#	Answer	%	Count
1	Mediation and conflict resolution mechanisms	15.69%	8
2	Establishing clear conflict resolution policies	41.18%	21

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

3	Creating forums for open dialogue	29.41%	15
4	Implementing stakeholder feedback loops	13.73%	7
5	Others (please specify)	0.00%	0
	Total	100%	51

Q16 - What are the main benefits of stakeholder engagement in agile project management for urban real estate affordable housing projects?

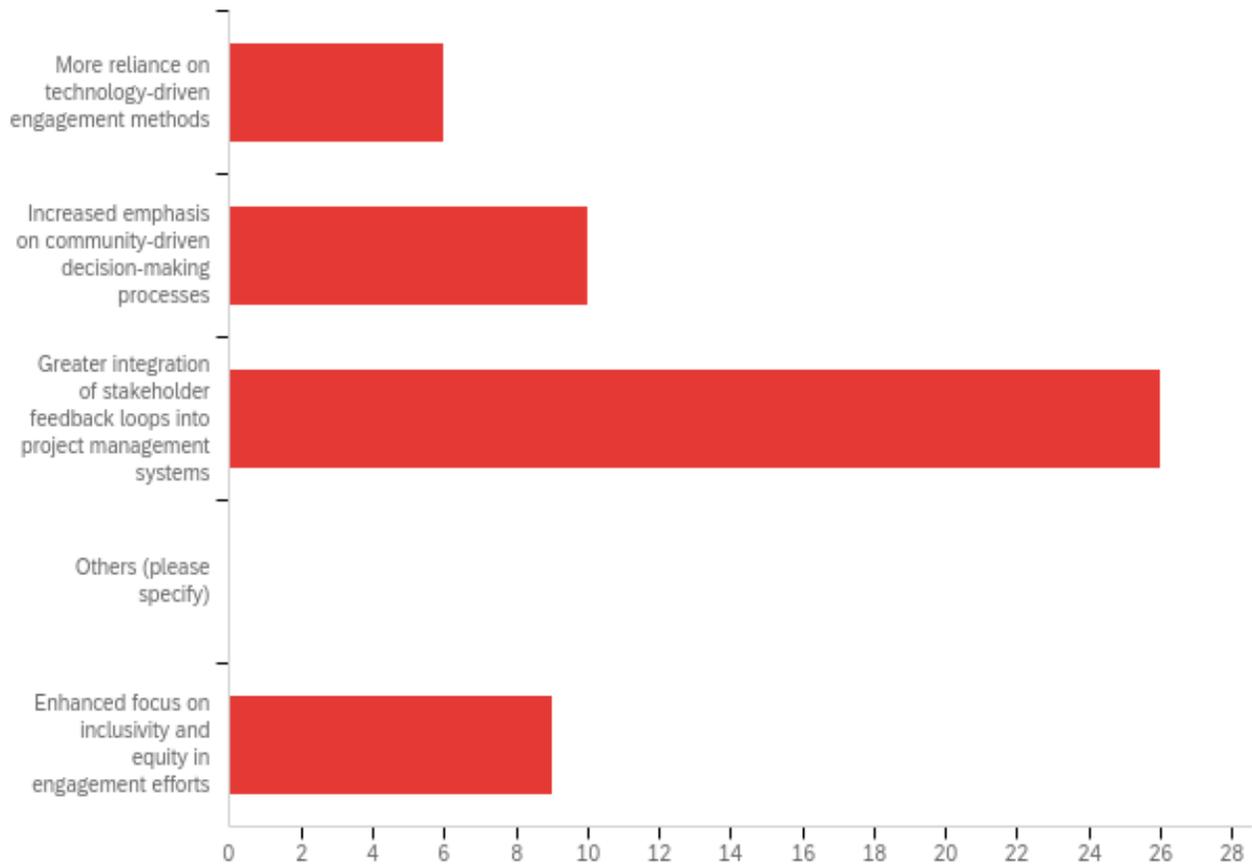


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What are the main benefits of stakeholder engagement in agile project management for urban real estate affordable housing projects? - Selected Choice	1.00	4.00	2.49	0.96	0.92	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

#	Answer	%	Count
1	Increased project transparency	19.61%	10
2	Enhanced project adaptability	25.49%	13
3	Better alignment with stakeholder expectations	41.18%	21
4	Improved project outcomes	13.73%	7
5	Others (please specify)	0.00%	0
	Total	100%	51

Q17 - How do you envision the future of stakeholder engagement practices evolving in the context of urban real estate affordable housing projects?



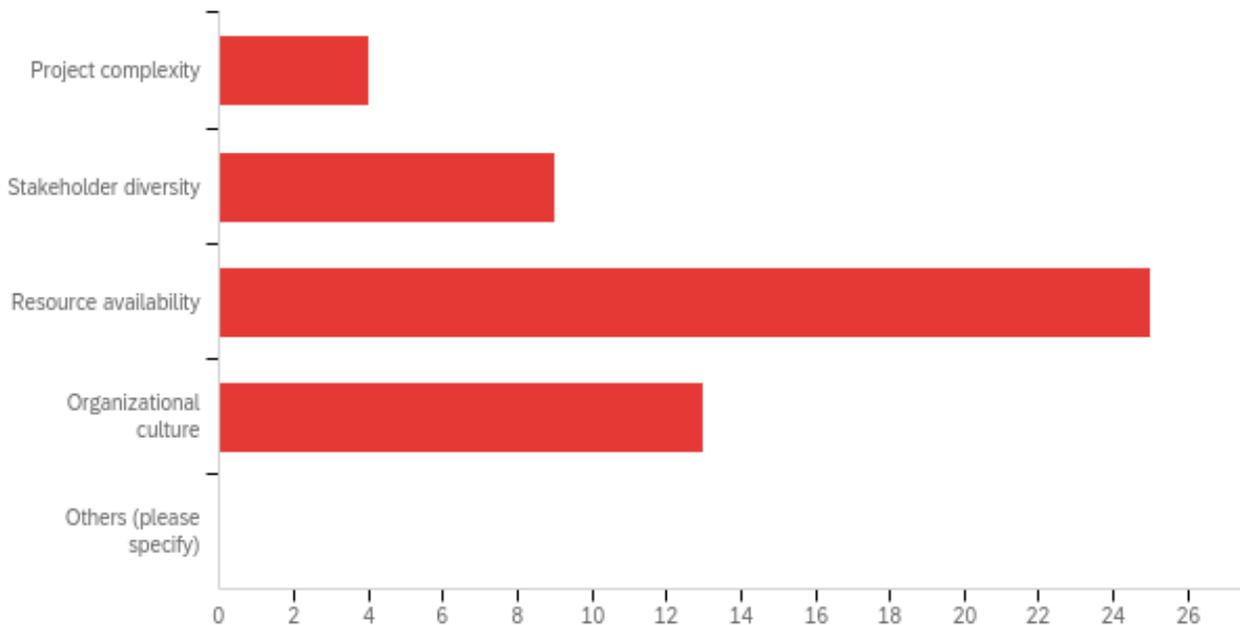
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you envision the future of stakeholder	1.00	6.00	3.10	1.50	2.25	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

engagement practices
evolving in the context of
urban real estate
affordable housing
projects? - Selected
Choice

#	Answer	%	Count
1	More reliance on technology-driven engagement methods	11.76%	6
2	Increased emphasis on community-driven decision-making processes	19.61%	10
3	Greater integration of stakeholder feedback loops into project management systems	50.98%	26
5	Others (please specify)	0.00%	0
6	Enhanced focus on inclusivity and equity in engagement efforts	17.65%	9
	Total	100%	51

Q18 - What factors influence the effectiveness of stakeholder engagement strategies in agile project management for urban real estate affordable housing projects?



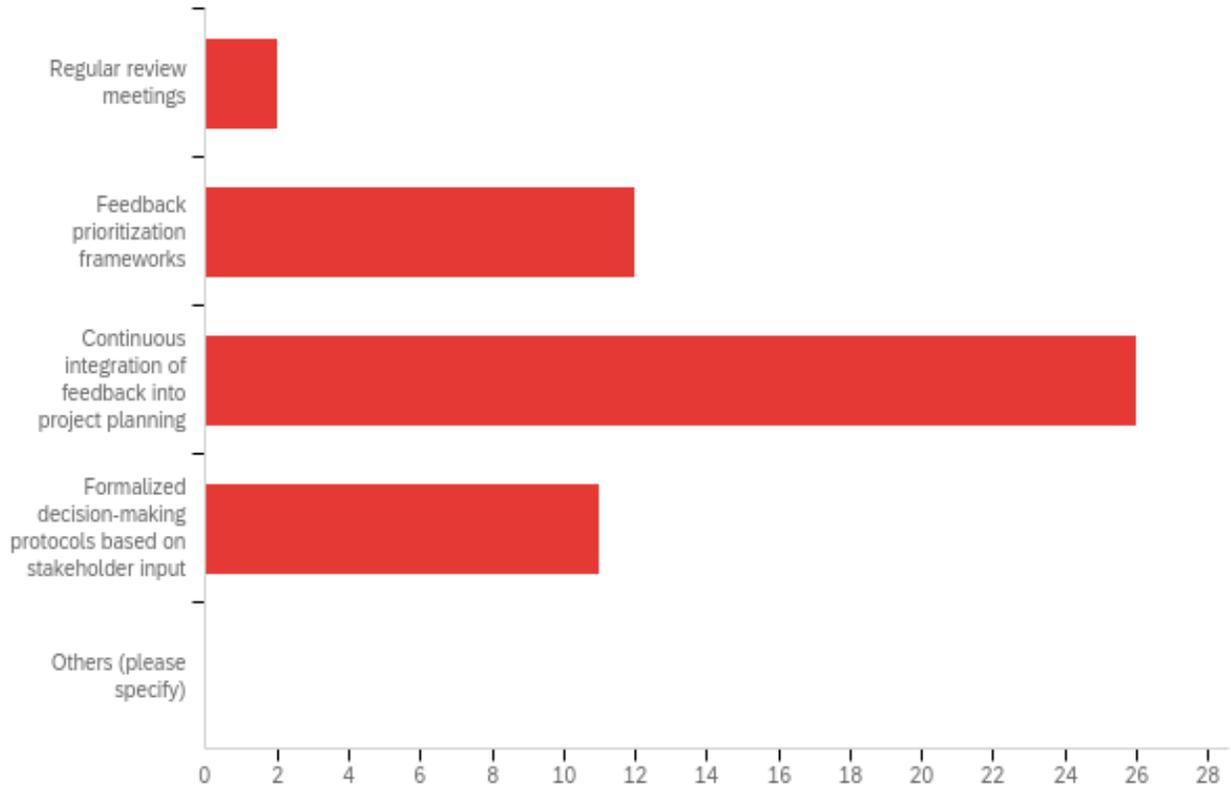
STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What factors influence the effectiveness of stakeholder engagement strategies in agile project management for urban real estate affordable housing projects? - Selected Choice	1.00	4.00	2.92	0.86	0.74	51

#	Answer	%	Count
1	Project complexity	7.84%	4
2	Stakeholder diversity	17.65%	9
3	Resource availability	49.02%	25
4	Organizational culture	25.49%	13
5	Others (please specify)	0.00%	0
	Total	100%	51

Q19 - What strategies do you recommend for incorporating stakeholder feedback into decision-making processes within agile project management for urban real estate affordable housing projects?

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING



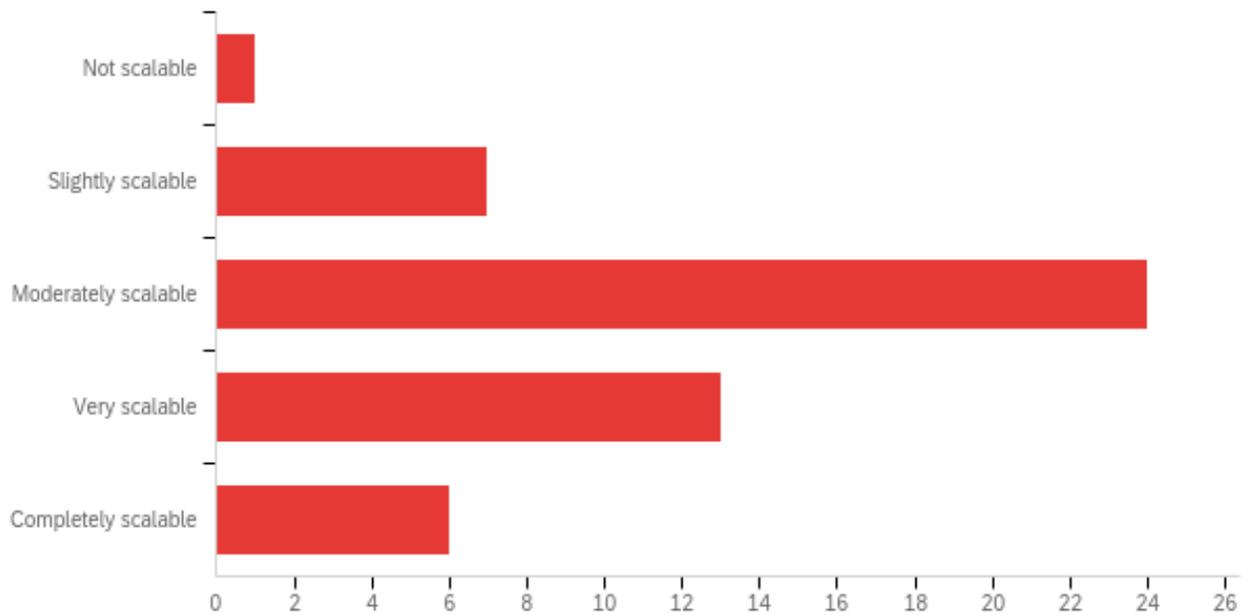
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What strategies do you recommend for incorporating stakeholder feedback into decision-making processes within agile project management for urban real estate affordable housing projects? - Selected Choice	1.00	4.00	2.90	0.77	0.60	51

#	Answer	%	Count
1	Regular review meetings	3.92%	2
2	Feedback prioritization frameworks	23.53%	12
3	Continuous integration of feedback into project planning	50.98%	26

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

4	Formalized decision-making protocols based on stakeholder input	21.57%	11
5	Others (please specify)	0.00%	0
	Total	100%	51

Q20 - How do you perceive the scalability of agile project management methodologies in addressing stakeholder engagement challenges across projects of varying sizes in urban real estate affordable housing?



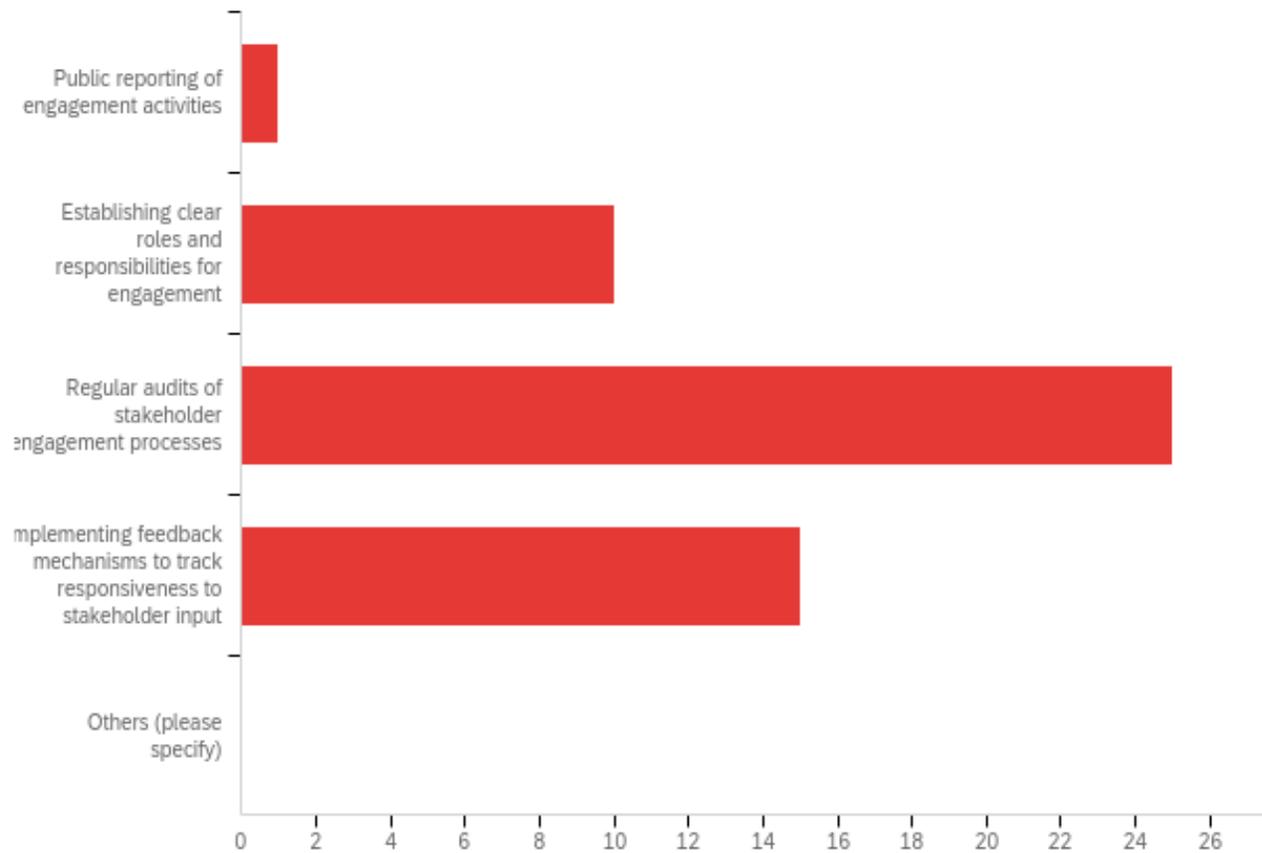
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you perceive the scalability of agile project management methodologies in addressing stakeholder engagement challenges across projects of varying sizes in urban real estate affordable housing?	1.00	5.00	3.31	0.92	0.84	51

#	Answer	%	Count
1	Not scalable	1.96%	1

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

2	Slightly scalable	13.73%	7
3	Moderately scalable	47.06%	24
4	Very scalable	25.49%	13
5	Completely scalable	11.76%	6
	Total	100%	51

21 - What mechanisms do you propose for ensuring accountability and transparency in stakeholder engagement efforts within agile project management for urban real estate affordable housing projects?



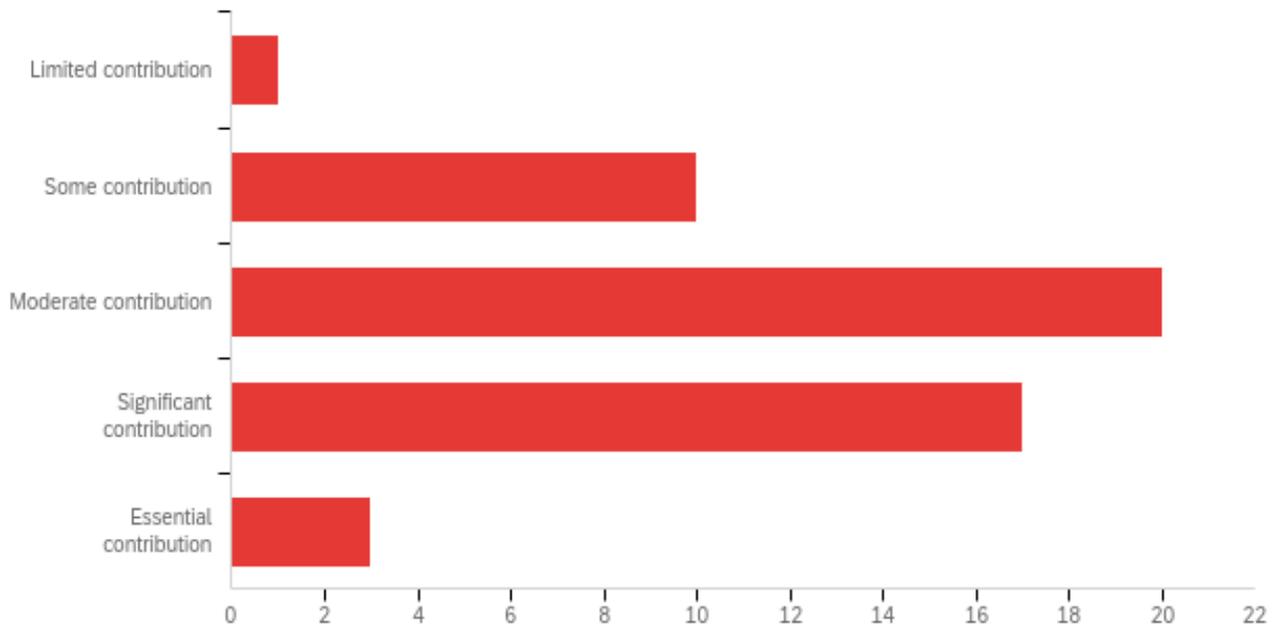
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What mechanisms do you propose to ensure accountability and transparency in stakeholder engagement efforts within agile project management for urban	1.00	4.00	3.06	0.75	0.57	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

real estate affordable housing projects? - Selected Choice

#	Answer	%	Count
1	Public reporting of engagement activities	1.96%	1
2	Establishing clear roles and responsibilities for engagement	19.61%	10
3	Regular audits of stakeholder engagement processes	49.02%	25
4	Implementing feedback mechanisms to track responsiveness to stakeholder input	29.41%	15
5	Others (please specify)	0.00%	0
	Total	100%	51

Q22 - How do you believe stakeholder engagement practices within agile project management can contribute to long-term sustainability and resilience in urban real estate affordable housing projects?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you believe stakeholder engagement	1.00	5.00	3.22	0.89	0.80	51

STAKEHOLDERS ENGAGEMENT IN AGILE PROJECT MANAGEMENT FOR AFFORDABLE HOUSING

practices within agile project management can contribute to long-term sustainability and resilience in urban real estate affordable housing projects?

#	Answer	%	Count
1	Limited contribution	1.96%	1
2	Some contribution	19.61%	10
3	Moderate contribution	39.22%	20
4	Significant contribution	33.33%	17
5	Essential contribution	5.88%	3
	Total	100%	51