

Assessment of Agile Project Management Challenges in the Philippine Telecommunications Industry

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Abstract- Agile Project Management (APM) has gained traction across many industries, including telecommunications, thanks to its ability to deliver results quickly, adapt to change, and improve teamwork. In the Philippines, however, rolling out Agile practices in telecom companies hasn't been without its hurdles. This study explores the real-world challenges faced by teams trying to make Agile work in this fast-paced, highly regulated sector. Through a combination of surveys and interviews with project managers, Scrum Masters, and developers, we uncover key issues such as resistance to change, lack of Agile know-how, outdated infrastructure, and organizational structures that don't always support Agile ways of working. Our findings highlight the importance of adapting Agile methods to fit the local context taking into account company culture, staff readiness, and compliance demands. We offer practical recommendations like focused training, stronger change management, and better leadership support to help teams overcome these challenges. This research sheds light on how Agile can be more effectively used in the Philippine telecom industry and offers guidance for those working to improve project delivery in similar environments.

successful implementation of agile is frequently hampered by the confrontation with traditional operating structures seen in many Philippine telecommunications organizations. These systems are usually characterized by strongly ingrained cultural norms and hierarchical organizational designs, which can cause resistance to change and hinder agile's collaborative nature.

Furthermore, integrating agile development methodologies with the sector's substantial legacy systems and infrastructure adds significant technical and administrative complexity. The industry's fast expansion, fueled by rivalry and technical improvements, needs the capacity to manage frequent scope adjustments and changing requirements efficiently. This study seeks to solve these issues by looking at the unique barriers to agile deployment in the Philippine telecommunications industry. Finally, it aims to give insights that will help the industry make a smoother transition to more agile methods, therefore increasing overall efficiency and responsiveness.

Indexed Terms- Agile Project Management

I. INTRODUCTION

1.1 Background of the Study

The Philippines' telecommunications sector is a key generator of economic growth and social development, but it has particular challenges in adopting to contemporary project management approaches. Agile techniques, famed for their flexibility and iterative approach, have the potential to aid this rapidly changing market. However, the

General Problem

Agile's adaptability contrasts with the inflexible systems common to Philippine telecommunications. This mismatch results in reluctance to change. Aligning agile with current long-term goals is complex. Fostering cross-departmental collaboration, which is critical for agile, becomes challenging. Hierarchical architectures hamper the necessary communication. Finally, these challenges limit the seamless implementation of Agile. The main issue is balancing agile's agility with traditional telecom

operations. This friction reduces the full potential of agile implementation.

Specific Problems

1. How do deeply rooted cultural norms and hierarchical structures in Philippine telecommunications limit the successful adoption and application of agile methodologies?
2. What are the key technical and procedural issues that arise when combining agile development approaches with the extensive legacy systems and infrastructure that exist in the Philippine telecommunications industry?
3. How efficiently can agile approaches manage frequent scope modifications and growing needs caused by competition and technical improvements in the dynamic Philippine telecommunications industry while maintaining project goals and timelines?

1.2 Review of Related Literature

To succeed in today's dynamic and competitive global market, organizations must move their attention away from cost reduction and toward agility, quality, and speed in order to match the specific demands of their customers. Agile Manufacturing (AM) is regarded as a critical paradigm for doing this, demanding Agile Project Management (APM) to support the creation of multiple outputs such as goods and services. APM implementation necessitates a considerable shift in thinking and behavior throughout the business, with an emphasis on adaptability and continual innovation. However, applying agile concepts is difficult, typically owing to company culture and inexperienced teams, emphasizing the significance of data analysis and good communication processes. The literature emphasizes the significance of people and teamwork in agile environments, suggesting the "AGILE team" of a product owner, team leader, and team members to assist this approach. Effective communication inside these teams and with stakeholders is seen as a vital component of effective agile adoption.^[1]

The foundation for understanding agile projects management is undoubtedly the Agile Manifesto, which

identified four essential values for software development initiatives. According to Beck et al. (2001), The Agile Manifesto states the following basic values: "Individuals and their interactions concerning procedures and tools"; "Working software on comprehensive documentation"; "Customer collaboration on contract negotiations"; and "Reacting to changes regarding following a plan".^[2]

Furthermore, the Agile Manifesto provided twelve important concepts, according to Santos and Carvalho (2021) summarizes customer pleasure as joint work between motivated With self-organized teams consisting of business representatives and developers that prioritize simplicity, Sustainable development, technological superiority, and agility.^[3]

1.3 Objective of the Study

General Objective

This researcher wants to get a thorough understanding of the challenges that restrict Philippine telecommunications businesses from successfully using agile strategies. It focuses on investigating the conflict that arises when fundamental concepts of agile, like as flexibility and iterative development, communicate with the sector's being present, sometimes inflexible, hierarchical organizational architecture. This study will look into how conventional structures, with their long-term planning focus, cause resistance when agile is implemented. Finally, this objective seeks to provide insights on the inherent discrepancies that limit agile's seamless integration into the Philippine telecommunications landscape.

Specific Objectives

1. To determine how deeply established cultural norms and hierarchical structures influence the adoption and deployment of agile approaches in Philippine telecommunications.

2. To identify the major technical and administrative challenges that occur when merging agile development methodologies with current traditional systems and infrastructure in the Philippine telecommunications sector.
3. To assess the effectiveness of agile methodologies in managing scope modifications and growing needs caused by economic trends and technical improvements while adhering to project goals and timeframes in the Philippine telecommunications industry.

1.4 Significance of the Study

This study provides valuable insights into the challenges and opportunities of applying agile approaches in the Philippine telecommunications industry, which is crucial to the country's infrastructure and growth. The study's analysis of the impact between agile concepts and traditional operational structures can assist to bridge the theoretical and practical gap. Practically, the findings can help telecommunications businesses streamline their operations, improve project management, and become more adaptable in a quickly changing technology context. Furthermore, the study's emphasis on social standards and hierarchical structures might contribute to a better understanding of organizational change management in the Philippine environment. Addressing the issues of combining agile with legacy systems will result in beneficial approaches for overcoming technological obstacles.

1.5 Scope and Limitations

This study investigates the distinctive difficulties experienced while defining and carrying out agile approaches in the telecoms industry. It aims to uncover the major problems that impede the efficacy of agile techniques, consequently influencing the output and efficiency of individuals and teams. Understanding these barriers is critical for improving workflows and project outcomes in this ever-changing business. The study's goal is to offer a clear understanding of how agile project management problems translate into actual consequences on

productivity indicators. Finally, the insights will help to build strategies and best practices for addressing these difficulties and improving overall performance inside telecoms firms.

II. RESEARCH METHODS

2.1 Research Design

To identify Agile Project Management Challenges in the Philippine Telecommunications Industry, data was collected using a descriptive study technique that included a survey questionnaire. At the end of the questionnaire, respondents were given the chance to contribute criticism and thoughts. This descriptive technique was chosen because it allows for an assessment of current trends, practices, and situations related to the research topic, which covers a wide spectrum of phenomena.

The survey questionnaire included Likert scale questions and was disseminated electronically via Google Forms, allowing respondents to participate through their email addresses.

2.2 Respondents of the Study

This respondent group included individuals fulfilling key roles such as project managers, radio frequency (RF) engineers, supervisors, and project/site engineers. Specifically, professionals from Globe Telecom located in Makati City, Philippines, were involved in the study. Their inclusion was crucial to ensure the research gathered insights directly from those with practical involvement in telecommunications projects. This targeted selection of respondents provided firsthand knowledge and valuable perspectives on the complexities of agile project management within the telecom sector. By focusing on a range of technical positions, the study obtained a holistic view of agile challenges across different functional areas.

2.3 Research Instruments

The principal research instrument was a properly developed questionnaire that included relevant data from prior studies and related literature. This questionnaire served as the foundation for obtaining empirical data, ensuring that the research was based

on prior academic studies. To increase participant reach, the questionnaire was sent through email and several digital media. Social media networks, particularly Facebook Messenger and Viber, were carefully used to increase distribution. This multi-channel approach sought to leverage the widely available accessibility and interaction provided by these internet platforms. The study aimed to collect data from a geographically scattered and diverse pool of respondents more efficiently by utilizing various platforms.

2.4 Statistical Treatment

The researchers utilized a systematic and rigorous approach to evaluate the information supplied by telecommunications practitioners. The researchers methodically organized and assessed the survey results, employing proper statistical procedures. Microsoft Excel was an essential tool in this procedure, allowing for easy data entry, cleaning, and administration, assuring the dataset's correctness and completeness. This thorough data manipulation was required to extract significant and applicable insights directly relevant to the issues of agile project management in the Philippine telecommunications business. The objective was to translate raw responses into useful results that may impact the sector's future practices and plans.

The mean technique supplemented this by assigning an average score to each element, providing another measure of central tendency in the replies. This comprehensive measurement of perceived relevance is vital for identifying the most pressing difficulties in agile project management in the Philippine telecommunications sector.

Where, n_1 = number of respondents for Strongly Disagree, n_2 = number of respondents for Disagree, n_3 = number of respondents for Neutral, n_4 = number of respondents for Agree, n_5 = number of respondents for Strongly Agree. And N is the total number of respondents.

$$Mean = \frac{\sum w}{N} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + n_1}{N}$$

Also, the researchers utilized a Likert scale to determine thoroughly from the items on the survey questionnaires the challenges in the implementation of agile project management in the telecommunications industry.

Likert Scale	Degree of Response	Description
5	4.21 - 5.00	Strongly Agree
4	3.41 - 4.20	Agree
3	2.61 - 3.40	Neutral
2	1.81 - 2.60	Disagree
1	1.00 - 1.80	Strongly Disagree

Table 1: Interpretation of the five-point Likert Scale

III. RESULTS AND DISCUSSION

Question	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Interpretation
Agile principles and practices are clearly understood across project teams.	1	3	5	13	8	3.80	Agree
Agile ceremonies (e.g., sprint planning, stand-ups, retrospectives) are conducted regularly and effectively.	0	2	4	14	10	4.07	Agree
Roles and responsibilities in Agile teams are clearly defined and consistently followed.	2	3	7	12	6	3.00	Agree
There is strong leadership support for Agile implementation in our organization.	2	5	6	11	6	3.50	Agree
Team members receive adequate training and resources to effectively use Agile methods.	1	3	6	14	6	3.70	Agree
Communication and collaboration among Agile team members are effective and efficient.	0	3	6	13	8	3.87	Agree
The tools used for Agile project tracking and task management (e.g., Jira, Trello) are suitable and user-friendly.	1	2	4	15	8	3.93	Agree
There is a culture of openness to feedback and continuous improvement in Agile projects.	2	3	7	12	6	3.00	Agree
Traditional project management mindsets (e.g., waterfall) hinder effective Agile adoption.	3	6	7	10	4	3.20	Neutral
Overall, Agile project management contributes positively to project outcomes in our organization.	0	1	3	12	14	4.30	Strongly Agree

Figure 1: Survey Results - <https://tinyurl.com/APM-Telco>

1. Agile principles and practices are clearly understood across project teams. The average score is 3.80, which is read as "Agree". This indicates that, on average, respondents believe Agile concepts are well grasped. This suggests that most team members have a solid understanding of the key ideals and concepts behind Agile techniques, resulting in more successful implementation and cooperation. This

understanding is critical for ensuring that Agile techniques are carried out appropriately and consistently across project teams.

2. Agile ceremonies (e.g., sprint planning, stand-ups, retrospectives) are conducted regularly and effectively. With a mean of 4.07, the interpretation is "Agree". This demonstrates a solid consensus that Agile practices are carried out consistently and efficiently. This high degree of agreement indicates that teams are effectively using Agile ceremonies to plan, measure progress, and improve their processes. The regular performance of these rituals is critical to sustaining momentum and keeping projects on pace.
3. Roles and responsibilities in Agile teams are clearly defined and consistently followed. The mean score of 3.60 indicates a "Agree" interpretation. This implies that responders typically agree on the clarity and consistency of responsibilities within Agile teams. Clear roles and duties are critical for effective cooperation and responsibility in Agile teams. This agreement shows that team members understand their unique responsibilities and how they fit into the larger project goals.
4. There is strong leadership support for Agile implementation in our organization. The mean is 3.50, which can also be translated as "agree." While still good, this is the lowest mean, suggesting that agreement may be less robust than in other characteristics. While respondents generally believe that leadership supports Agile, the somewhat lower score suggests that there is space for growth in terms of successfully expressing and conveying this support. Strong leadership support is critical for fostering Agile adoption and ensuring teams have the resources and support they require to thrive.
5. Team members receive adequate training and resources to effectively use Agile methods. A mean score of 3.70 suggests that team members are adequately prepared for Agile techniques. This implies that the organization is providing the required training and resources for team members to implement Agile methodology effectively. Adequate training and resources are essential for ensuring that teams effectively apply Agile methods and meet project objectives.
6. Communication and collaboration among Agile team members are effective and efficient. The average score of 3.87 indicates agreement on excellent communication and cooperation among Agile teams. Effective communication and teamwork are critical for Agile success. This agreement implies that team members can communicate and interact effectively, which leads to improved coordination and issue resolution.
7. The tools used for Agile project tracking and task management (e.g., Jira, Trello) are suitable and user-friendly. With a mean of 3.93, respondents believe that the instruments utilized are acceptable and simple to use. Effective Agile project management requires the use of appropriate and user-friendly technologies. This agreement implies that the organization has chosen technologies that are appropriate for Agile teams and assist their work.
8. There is a culture of openness to feedback and continuous improvement in Agile projects. The mean score is 3.60, which is translated as "Agree". This demonstrates a positive culture of feedback and improvement in Agile initiatives. Agile success requires an open culture that welcomes feedback and strives for continual improvement. This agreement indicates that teams are eager to learn from their experiences and make changes to enhance their procedures.
9. Traditional project management mindsets (e.g., waterfall) hinder effective Agile adoption. This sentence has a mean score of 3.20, indicating a "Neutral" interpretation. This shows that respondents are neither strongly agreeing nor strongly disagreeing with conventional views that

impede Agile adoption. The neutral posture shows that, while Agile is being implemented, traditional project management methodologies may continue to have an impact.

10. Overall, Agile project management contributes positively to project outcomes in our organization. The highest mean of 4.30 indicates a "Strongly Agree" interpretation. This implies a very positive view of Agile's influence on project outcomes. This widespread agreement indicates that Agile is seen as a beneficial strategy that helps greatly to project success throughout the business.

IV. SUMMARY, CONCLUSION AND RECOMMENDATION

4.1 Summary of Findings

The survey results show a generally positive picture of how Agile is being practiced across teams. Most people feel that they understand the principles well, and they see value in the regular Agile ceremonies like sprint planning and daily stand-ups. Existing tools are seen as helpful in keeping work organized, and teams seem to be communicating and collaborating effectively which also suggest that Agile is becoming an integral part of how projects are run.

That said, there are still a few areas where people feel things could be better. Some team members aren't entirely clear on their roles, or they feel that responsibilities aren't always followed consistently. While there is leadership support for Agile, it's not always visible or consistent across the board. Similarly, not everyone feels they have enough training or resources to use Agile methods confidently, suggesting a need for more hands-on support and learning opportunities.

One notable insight is the mixed feelings around traditional project management mindsets. While some teams have fully embraced Agile, others seem to be held back by old habits and ways of working. Despite these challenges, it's encouraging to see that most people believe Agile is helping their projects succeed. With a bit more support and a stronger cultural shift,

the organization has the potential to fully realize the benefits of Agile

4.2 Conclusions

Agile is gaining meaningful traction within the Philippine telecommunications industry. Teams are starting to embrace Agile practices with confidence, many understand the principles, participate regularly in key ceremonies, and make good use of tools like Jira and Trello to manage their work. Communication within teams is generally strong, and there's a growing sense that Agile is helping projects move more smoothly and deliver better results. This shows that the industry is heading in the right direction, using Agile to respond more quickly and effectively to change.

Still, the journey isn't without its bumps. Some team members are unclear about their roles, and not everyone feels they've had enough training to fully leverage Agile. In some areas, traditional ways of working still hold a strong grip, making it harder to fully shift to an Agile mindset. While leadership support exists, it isn't always felt across the board. To truly move forward, organizations need to double down on leadership visibility, invest in ongoing training, and actively work to create a culture that embraces change and continuous improvement. With these steps, the industry can unlock the full potential of Agile and stay competitive in an ever-evolving landscape.

4.2 Recommendations

To make Agile project management more effective in the Philippine telecommunications industry, organizations should take a more hands-on and people-focused approach to supporting their teams. This starts with offering regular, role-specific training to help everyone from new hires to seasoned professionals, understand how Agile works and how they can contribute to it. Clear roles and responsibilities also go a long way in helping teams work more smoothly and confidently, avoiding unnecessary confusion or duplication of efforts.

Leaders also play an important role in this transformation. It's not enough for them to simply approve Agile practices. They need to be present,

involved, and vocal in supporting their teams. Whether it's attending Agile ceremonies or helping shape a culture that embraces change, their visibility sends a strong message. At the same time, it's important to gently challenge old project management habits. Opening up honest conversations, guiding teams through change, and recognizing even small Agile wins can build trust and momentum.

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