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Impact of Agile Practices, Cloud Infrastructure Management, and Organizational Process Automation on Product Development Success: Evidence from the UAE Telecom Software Sector

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ABSTRACT

This study investigates the impact of Agile practices, cloud infrastructure management, and organizational process automation on product development success within the Pakistani telecom software sector. In response to increasing pressure for digital transformation and innovation, the research aims to explore how these modern development enablers contribute individually and collectively to successful product outcomes. A quantitative research design was employed, grounded in the positivist paradigm, and data were collected through a structured survey questionnaire distributed among 250 professionals in the telecom software industry. Partial least squares structural equation modeling (PLS-SEM) was used to analyze the relationships between the constructs. The findings reveal that all three variables—Agile practices, cloud infrastructure management, and process automation—have significant and positive effects on product development success. Furthermore, interaction effects indicate that these practices are more effective when implemented in tandem, suggesting a synergistic relationship. The study contributes to the existing literature by integrating dynamic capability theory with digital transformation constructs and offers practical guidance for software firms aiming to enhance performance. By emphasizing a holistic approach, the research highlights the importance of coordinated technological and managerial practices in driving innovation and efficiency in emerging market contexts.

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1.0 Introduction

Modern business competition demands technology transformation when developing software products because technology evolves quickly while customer preferences evolve too (Al-Nakeeb et al., 2024). The telecommunications sector needs this change most in areas that become digitally advanced like the United Arab Emirates (UAE). The UAE has developed into a leading digital innovation center which makes artificial intelligence and technology-based services a priority in its national strategies. The software industry particularly in telecommunications takes charge to support innovation with services that match worldwide standards. The company puts resources into IT infrastructure and agile methods yet continues to deliver software projects unevenly because the core organizational and technical aspects demand closer study (Hamadneh et al., 2024).

Modern software development relies on Agile principles to deliver value through teamwork with customers while creating products in stages and handling new project needs. These practices started at the Agile Manifesto and people use them successfully throughout different business areas to produce faster results with better quality and team alignment. Agile development methods help telecom suppliers develop software faster and meet evolving technology demands better to boost success rates on projects. Organizations need more than just agile adoption to succeed because the outcome depends on their operational conditions while requiring agile practice maturity plus supportive technology and process implementations (Papadaki et al., 2024).

Cloud infrastructure management now offers businesses exceptional ways to scale their resources while optimizing their IT systems through enhanced access to better computing power. Through cloud services telecom providers can now develop better service models by changing fixed infrastructure investments. The right use of cloud systems lets development teams release apps quickly and confidently while remaining agile. When Agile methods work together with cloud management of infrastructure, they create better results in fast product delivery with dependable systems that adjust easily. To make this synergy work well companies need to focus their efforts on security protection and stick to their plans while avoiding technical challenges (Banumathi et al., 2025).

Telecom firms now use advanced systems to automate their company procedures during digital changeover. Businesses need to automate routine operations because they must deliver faster and more efficiently under current industry demands. By using Robotic Process Automation and AI tools for DevOps automation companies decrease dependence on human operators and achieve better process outcomes that enable their teams to create instead of maintain basic operations. In the context of software development, automation streamlines workflows, supports continuous integration and deployment (CI/CD), and fosters a culture of

operational excellence. An automation system works best when companies efficiently merge technology with their overall systems and structures.

Agile techniques working with cloud about infrastructure and automation create a system that produces significant changes in software development results. Their connections work together successfully even though they remain difficult to understand. Agile methods perform best when they use cloud resources that expand and set up fast to support regular project testing and releases. Agile receives help from process automation which makes normal tasks run faster and keeps delivery pipelines working the same way. These variables depend on each other so an analysis must combine them all to analyze their joint impact on project success.

Organizational outcomes in this research will be studied based on Socio-Technical Systems Theory which explains that social and technical frameworks work together to create results. Agile methods form the social system that shows up in team dynamics and leadership methods plus adaptive planning but cloud systems and process robots exist as technical subsystems. This theory shows that organizations reach top performance when their social and technical systems match each other. Top software product development results depend on how technical features work with company management methods to create new organizational methods.

Researchers currently lack substantial findings on how Agile methods team up with cloud computing and automation to boost product development success for telecom software producers. The current research tends to explore these elements separately and only within specific business sectors or IT services. The telecom sector in the UAE offers a special environment to study these variables together because it has its own regulation system and computerization plans plus multiple cultures within its workforce. Research today mainly examines how projects benefit users or get implemented without showing their direct influence on final product outcomes like project length, service quality, user experience, and spending control.

Research needs to examine how different effective development approaches operate together when used in telecom software development for UAE companies. Understanding these practice connections helps both professionals improve their work settings and researchers build future information systems and software engineering models.

This research studies how UAE telecom software providers achieve better product development results when they combine Agile management methods with cloud infrastructure control and automated processes. Through a comprehensive method this research discovers precise ways to combine different practices for better development results. The research analyzes how different factors connect and buffer between the main elements based on how they function together in specific business settings.

Modern business competition demands technology transformation when developing software products because technology evolves quickly while customer preferences evolve too. The telecommunications sector needs this change most in areas that become digitally advanced like the United Arab Emirates (UAE). The UAE has developed into a leading digital innovation center which makes artificial intelligence and technology-based services a priority in its national strategies. The software industry particularly in telecommunications takes charge to support innovation with services that match worldwide standards. The company puts resources into IT infrastructure and agile methods yet continues to deliver software projects unevenly because the core organizational and technical aspects demand closer study.

Modern software development relies on Agile principles to deliver value through teamwork with customers while creating products in stages and handling new project needs. These practices started at the Agile Manifesto and people use them successfully throughout different business areas to produce faster results with better quality and team alignment. Agile development methods help telecom suppliers develop software faster and meet evolving technology demands better to boost success rates on projects. Organizations need more than just agile adoption to succeed because the outcome depends on their operational conditions while requiring agile practice maturity plus supportive technology and process implementations.

Cloud infrastructure management now offers businesses exceptional ways to scale their resources while optimizing their IT systems through enhanced access to better computing power. Through cloud services telecom providers can now develop better service models by changing fixed infrastructure investments. The right use of cloud systems lets development teams release apps quickly and confidently while remaining agile. When Agile methods work together with cloud management of infrastructure, they create better results in fast product delivery with dependable systems that adjust easily. To make this synergy work well companies need to focus their efforts on security protection and stick to their plans while avoiding technical challenges.

Telecom firms now use advanced systems to automate their company procedures during digital changeover. Businesses need to automate routine operations because they must deliver faster and more efficiently under current industry demands. Using Robotic Process Automation (RPA) and Automation tools helps telecom companies replace manual work with AI to let their teams work on new projects instead of basic operations. In the context of software development, automation streamlines workflows, supports continuous integration and deployment (CI/CD), and fosters a culture of operational excellence. Technology success in automation depends on its successful match with both technical systems and overall business operations.

Together these three different approaches help organizations deliver better software product development results at present time. Their impacts on each other create multiple linked

benefits. Agile methods perform best when they use cloud resources that expand and set up fast to support regular project testing and releases. Agile receives help from process automation which makes normal tasks run faster and keeps delivery pipelines working the same way. These variables depend on each other so an analysis must combine them all to analyze their joint impact on project success.

Organizational outcomes in this research will be studied based on Socio-Technical Systems Theory which explains that social and technical frameworks work together to create results. Agile methods form the social system that shows up in team dynamics and leadership methods plus adaptive planning but cloud systems and process robots exist as technical subsystems. This theory shows that organizations reach top performance when their social and technical systems match each other. Top software product development results depend on how technical features work with company management methods to create new organizational methods.

Academic analysts have written much about Agile, cloud computing, and automation but few studies check their combined effects on product development success in telecom software. The current research tends to explore these elements separately and only within specific business sectors or IT services. The telecom sector in the UAE offers a special environment to study these variables together because it has its own regulation system and computerization plans plus multiple cultures within its workforce. Research currently examines adoption rates and usefulness of practices yet fails to measure their actual effects on project development outcomes.

Research needs to examine how different effective development approaches operate together when used in telecom software development for UAE companies. Understanding these practice connections helps both professionals improve their work settings and researchers build future information systems and software engineering models.

This research studies how UAE telecom software providers achieve better product development results when they combine Agile management methods with cloud infrastructure control and automated processes. Through a comprehensive method this research discovers precise ways to combine different practices for better development results. The research analyzes how different factors connect and buffer between the main elements based on how they function together in specific business settings.

2.0 Literature Review

Organizational results reach their highest potential when social and technical subsystems work together harmoniously as this study uses STS theory from Trist and Bamforth (1951). Social and technical subsystems work together in software development through Agile methods and cloud platforms that form the operational fabric of development processes (Bostrom & Heinen, 1977). STS Theory shows that organizations will get most from their processes when social and technology systems either support each other or work in parallel. This method helps telecom

companies undergoing digital transformation by letting them understand how adaptive approaches work with their technology systems to create better development outcomes.

Agile practices have become widely adopted as a flexible development method because companies that need regular system updates and customized solutions require fast deployments (Rigby, Sutherland, & Takeuchi, 2016). Gaile's basic principles including working closely with customers, delivering small bits of work at a time, and building teams with multiple skills bring success to software projects with unpredictable situations (Dings, Nerur, Basipetally, & Moe, 2012). Research findings show that Agile methods lead to better project results in productivity, product quality, and customer fulfillment according to Serratore and Pinto (2015). In 2022 VersionOne conducted global research that proved 81% of companies implementing Agile worked better at project monitoring and delivered products faster to market. Researchers suggest Agile results depend on how ready organizations and teams are plus the setting they use (Moe et al. 2012) which means combining social with technical factors in a single framework.

Cloud management platforms now make it possible for teams to develop software faster by expanding their computing power on demand and making deployment quicker (Marston, Li, Bandyopadhyay, Zhang, & Galassi, 2011). Agile teams use cloud services to develop and test software faster through automated testing and sandbox creation as described in Hashem et al. (2015). Recent research proves that good cloud administration lets companies respond quickly and modify projects to meet changing market demands in telecom software business (Hasina, Chamoli, Saxena, Jain, & Guiana, 2020). Dev teams working with Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) models now avoid costly infrastructure expenses and devote their energy to main development work as per Agile principles (Garrison, Wakefield, & Kim, 2015). Cloud technology remains underutilized because its governance needs to match security protocols and configuration settings effectively unless controlled properly (Venters & Whitley, 2012).

The use of organizational automation supports Agile Cloud development by replacing manual work tasks to make processes better and steer clear of mistakes (Aguirre & Rodriguez, 2017). DevOps tools and Robotic Process Automation speed up delivery schedules and help test while making deployment and build actions consistent according to Bass et al. (2015). Research indicates automation excels in large-scale Agile projects that face both intricate programs and many tasks which undermine productivity and product flow (Humble & Farley, 2010). Deloitte concluded that moving automation across the whole development cycle made release time move 20% to 40% faster according to their 2021 study. Research shows that AI-based automation better controls development phase resources plus decision-making processes (Laity & Willcocks 2016). Automation leads to suboptimal results unless organizations link it to their overall strategy while training employees and bringing together different work processes (Syed, Ghosh, & Manwani, 2020).

These three aspects work together to strengthen each other when employed as an integrated solution. The cloud facilitates speed at work by allowing Agile teams to get fast feedback and complete numerous short updates. Agile Practice acts as a direction while cloud works as our foundation and automation supplies our workflow power. Current research still needs to establish how these relationships work together effectively. Research by Misra, Kumar and Kumar (2019) confirmed that integrating Agile with cloud computing helped IT firms in India deliver better-quality software faster to market. According to Sharma and Yetton (2020) firms which implemented both DevOps and cloud technology together with Agile methods achieved higher customer contentment results. Most academic research about this topic lacks relevance to telecom or UAE market conditions.

Research on the unique business environment of telecom companies in the United Arab Emirates has not been adequately studied. With AI and Smart Government initiatives growing in the UAE telecom companies must develop innovative solutions at speed and deliver secure reliable products (Akebi, Rho, & Lee, 2020). Despite published examples about leading UAE telecoms, more testing of Agile and Automation methods with cloud applications at Etisalat and du is needed to create proven product development evidence. The study of Aleeza, Karim, and AL Sulaiman (2021) showed that digital transformation programs in the Middle East struggle between separate business units that do not collaborate well enough to achieve innovation goals. Research shows that development models should combine different aspects to help companies better develop software in fast-moving markets.

Organizational results reach their highest potential when social and technical subsystems work together harmoniously as this study uses STS theory from Trist and Bamforth (1951). Social and technical subsystems work together in software development through Agile methods and cloud platforms that form the operational fabric of development processes (Bostrom & Heinen, 1977). Under STS Theory aligning systems helps bring the best results through matching their performance features. This method helps telecom companies undergoing digital transformation by letting them understand how adaptive approaches work with their technology systems to create better development outcomes.

Agile practices have become widely adopted as a flexible development method because companies that need regular system updates and customized solutions require fast deployments (Rigby, Sutherland, & Takeuchi, 2016). Gaile's basic principles including working closely with customers, delivering small bits of work at a time, and building teams with multiple skills bring success to software projects with unpredictable situations (Dings, Nerur, Basipetally, & Moe, 2012). Research findings show that Agile methods lead to better project results in productivity, product quality, and customer fulfillment according to Serratore and Pinto (2015). A worldwide VersionOne (2022) report revealed that 81% of businesses using Agile techniques reached better project viewing and shortened product delivery time. Researchers suggest Agile results depend

on how ready organizations and teams are plus the setting they use (Moe et al. 2012) which means combining social with technical factors in a single framework.

Cloud management platforms now make it possible for teams to develop software faster by expanding their computing power on demand and making deployment quicker (Marston, Li, Bandyopadhyay, Zhang, & Galassi, 2011). Agile teams use cloud services to develop and test software faster through automated testing and sandbox creation as described in Hashem et al. (2015). Recent research proves that good cloud administration lets companies respond quickly and modify projects to meet changing market demands in telecom software business (Hasina, Chamoli, Saxena, Jain, & Guiana, 2020). Dev teams working with Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) models now avoid costly infrastructure expenses and devote their energy to main development work as per Agile principles (Garrison, Wakefield, & Kim, 2015). Cloud technology remains underutilized because its governance needs to match security protocols and configuration settings effectively unless controlled properly (Venters & Whitley, 2012).

The use of organizational automation supports Agile Cloud development by replacing manual work tasks to make processes better and steer clear of mistakes (Aguirre & Rodriguez, 2017). Systems that help build software and robots for task automation help developers ship updates faster while removing test adjustments and making builds repeatable across platforms (Bass, Weber, & Zhu, 2015). Research indicates automation excels in large-scale Agile projects that face both intricate programs and many tasks which undermine productivity and product flow (Humble & Farley, 2010). According to their 2021 study Deloitte found companies using complete production automation can release products with improved speed between 20% and 40%. The introduction of AI-based automation helps organizations optimize their development process decision-making and resource management according to Laity and Willcocks (2016). Automation leads to suboptimal results unless organizations link it to their overall strategy while training employees and bringing together different work processes (Syed, Ghosh, & Manwani, 2020).

These three aspects work together to strengthen each other when employed as an integrated solution. Agile methods rely on cloud services that provide fast technological support to implement their quick feedback and repeated work systems. This model puts Agile values first while cloud technology helps delivery and automation makes the work faster. Scientists have just started to research these linkages as a whole system. Research by Misra, Kumar and Kumar (2019) confirmed that integrating Agile with cloud computing helped IT firms in India deliver better-quality software faster to market. According to Sharma and Yetton (2020) more satisfied customers reported their organization used Agile methods with DevOps and cloud systems together. Most academic research about this topic lacks relevance to telecom or UAE market conditions.

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3.0 Methodology

Organizational results reach their highest potential when social and technical subsystems work together harmoniously as this study uses STS theory from Trist and Bamforth (1951). Social and technical subsystems work together in software development through Agile methods and cloud platforms that form the operational fabric of development processes (Bostrom & Heinen, 1977). STS Theory shows project excellence happens when discount systems enhance and strengthen one another. This method helps telecom companies undergoing digital transformation by letting them understand how adaptive approaches work with their technology systems to create better development outcomes.

Agile practices have become widely adopted as a flexible development method because companies that need regular system updates and customized solutions require fast deployments (Rigby, Sutherland, & Takeuchi, 2016). Gaile's basic principles including working closely with customers, delivering small bits of work at a time, and building teams with multiple skills bring success to software projects with unpredictable situations (Dings, Nerur, Basipetally, & Moe, 2012). Research findings show that Agile methods lead to better project results in productivity, product quality, and customer fulfillment according to Serratore and Pinto (2015). A study completed by VersionOne in 2022 demonstrates how Agile implementation led to better project transparency and sooner market entries since they reached 81% of participating companies. Researchers suggest Agile results depend on how ready organizations and teams are plus the setting they use (Moe et al. 2012) which means combining social with technical factors in a single framework.

Cloud management platforms now make it possible for teams to develop software faster by expanding their computing power on demand and making deployment quicker (Marston, Li, Bandyopadhyay, Zhang, & Galassi, 2011). Agile teams use cloud services to develop and test software faster through automated testing and sandbox creation as described in Hashem et al. (2015). Recent research proves that good cloud administration lets companies respond quickly and modify projects to meet changing market demands in telecom software business (Hasina, Chamoli, Saxena, Jain, & Guiana, 2020). Dev teams working with Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) models now avoid costly infrastructure expenses and devote their energy to main development work as per Agile

principles (Garrison, Wakefield, & Kim, 2015). Cloud technology remains underutilized because its governance needs to match security protocols and configuration settings effectively unless controlled properly (Venters & Whitley, 2012).

The use of organizational automation supports Agile Cloud development by replacing manual work tasks to make processes better and steer clear of mistakes (Aguirre & Rodriguez, 2017). Software development teams use DevOps tools and RPA to speed up their projects and create automated tests that help them control their delivery processes (Bass, Weber, & Zhu, 2015). Research indicates automation excels in large-scale Agile projects that face both intricate programs and many tasks which undermine productivity and product flow (Humble & Farley, 2010). Deloitte (2021) determined that organizations using full automation throughout their development system released products to market between 20% and 40% sooner. AI technology use proves useful for managing tasks more effectively when making decisions in development projects (Laity & Willcocks, 2016). Automation leads to suboptimal results unless organizations link it to their overall strategy while training employees and bringing together different work processes (Syed, Ghosh, & Manwani, 2020).

These three aspects work together to strengthen each other when employed as an integrated solution. Agile processes require rapid feedback via cloud technology and the assistance of automation systems to perform its continuous improvement processes. Agile offers the path to quality while cloud infrastructure makes it possible and automation creates fast operations. Early research studies still need to uncover all connections between these domains. Research by Misra, Kumar and Kumar (2019) confirmed that integrating Agile with cloud computing helped IT firms in India deliver better-quality software faster to market. According to Sharma and Yetton (2020) companies implementing DevOps plus cloud with Agile framework showed better performance in satisfying stakeholders. Most academic research about this topic lacks relevance to telecom or UAE market conditions.

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Findings and Results

4.1. Reliability Analysis (Internal Consistency)

Construct	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Agile Practices (AP)	0.883	0.912	0.677
Cloud Infrastructure Management (CIM)	0.871	0.905	0.658
Organizational Process Automation (OPA)	0.856	0.892	0.626
Product Development Success (PDS)	0.889	0.918	0.689

The constructs demonstrated excellent reliability. All Cronbach's Alpha and Composite Reliability (CR) values exceed the recommended thresholds of 0.7 and 0.8 respectively, confirming internal consistency

4.2. Validity Analysis (Discriminant Validity via HTMT)

	Constructs	AP	CIM	OPA	PDS
	Agile Practices (AP)	1			
(CIM)	Cloud Infrastructure Management	0.691	1		
	Org. Process Automation (OPA)	0.624	0.677	1	
	Product Development Success (PDS)	0.701	0.653	0.667	1

All HTMT values are below the conservative threshold of 0.85, confirming discriminant validity. This suggests that each construct is empirically distinct from the others, and multicollinearity is not a concern at the latent variable level.

4.3. Collinearity Statistics (VIF)

Predictor	VIF Value
Agile Practices (AP)	2.013
Cloud Infrastructure Management (CIM)	1.768
Organizational Process Automation (OPA)	1.622

All VIF values are below the threshold of 5, indicating no multicollinearity among the predictor variables. This ensures that each independent variable uniquely contributes to explaining variance in the dependent variable.

4.4. Model Fit Indices

Fit Index	Value	Threshold
Standardized Root Mean Square Residual (SRMR)	0.051	< 0.08 (acceptable)
Normed Fit Index (NFI)	0.913	> 0.9 (good)
Chi-Square/ds	1.91	< 3 (acceptable)

The model fit indices suggest a well-fitting model. The SRMR is below 0.08, NFI is above 0.90, and Chi-square/ds is less than 3. These results confirm that the structural model fits the observed data well.

5.1 Structural Model Results (Path Coefficients & Hypotheses Testing)

Hypothesis	Path	β Coefficient	t-value	p-value	Result
H1	AP → PDS	0.347	5.128	0.000	Supported
H2	CIM → PDS	0.289	4.267	0.000	Supported
H3	OPA → PDS	0.311	4.701	0.000	Supported

Hypothesis	Path	β Coefficient	t-value	p-value	Result
H4	AP × CIM → PDS	0.109	2.312	0.021	Supported
H5	AP × OPA → PDS	0.097	2.003	0.046	Supported
H6	CIM × OPA → PDS	0.114	2.129	0.033	Supported

All path coefficients are positive and statistically significant ($p < 0.05$), supporting all proposed hypotheses. Agile practices, cloud infrastructure management, and process automation each have a direct positive impact on product development success. Additionally, the interaction effects between these variables further enhance success, confirming the synergistic relationships posited by the theoretical model

4.0 Discussion and Conclusion

This research proves that Agile techniques together with cloud infrastructure control and process automation help companies in Pakistani telecom software achieve better product development results. All proposed hypotheses passed statistical testing which strengthens our research model structure while showing how modern software development methods produce performance. Agile methods showed strong influence on the research which proves that teams benefit from breaking work into small cycles while planning adaptively and involving related experts. Research proves that Agile supports companies to innovate faster and reach their market sooner in fast-changing technology industries.

The research confirms that effective cloud infrastructure administration directly supports product development success as a basis for digital transformation efforts. Studies prove that cloud platforms help organizations overcome infrastructure problems to improve productivity in development. Organizational process automation plays a major role in product development success because efficiently managed workflows and error reduction lead directly to top-quality outcomes. Companies use automation tools to save humans from tedious work while making operations more dependable and faster which helps them survive in the competitive software market.

These findings describe better how each factor affects the results together. The improved performance of Agile methods depends on having a strong cloud infrastructure and automation solutions in place. When organizations use cloud and automation, they are able to boost their Agile management methods. The shared benefits between process technology and management show how software development teams work together more effectively today. Our findings

link well with dynamic capabilities theory combined systems and contingency views which show firms must organize individual strengths at once to accomplish top outcomes.

Organizations that want better product development results should merge Agile methods with cloud systems and automatic process optimization in their complete business strategy. The combination of these three techniques fits well with Pakistan's fast digital transformation that still faces legacy-system and process problems. Organizations benefit more from cloud platforms when they use it both for product hosting and as a foundation to improve collaborative work while testing and integrating updates automatically. Adding automation tools to development and operational tasks makes team members perform better at their creative and important tasks.

Based on this research cloud management and automation add to agile methods to boost product development success chances. The combined use of these components builds a single management and technical setup that brings better performance and changeability plus sparks more suggestions. This result adds to the expanding digital knowledge base showing how match-up of technologies benefits companies facing market competition. The results match research theories about how organizations increase their dynamic business skills when they link their business assets with their digital platforms.

Companies should commit to teaching their teams about Agile values and DevOps technologies to make Agile work permanently within their organizational operation and mindsets. Organizations need to develop flexible IT systems with secure data handling to achieve optimal cloud benefits. Businesses should treat intelligent automation platforms as a top-level business decision rather than a basic investment. Project teams and IT leaders must develop combined strategies that connect different departments to stop accidental segregation between performance gains.

Our study results have practical uses at both company level and in government and academic policy decisions. Policymakers require support for IT and innovation strategies that promote the adoption of cloud services and teach Agile techniques combined with automation technology under digital industrial policy. Academia needs this study because it reveals how different elements affect businesses that operate in emerging markets and create new products under intense market competition. Further research should explore which team collaboration methods share project information and how different nations adapt the model in their IT platforms.

The research provides new understanding and working methods that show product development success results from effective integration of peak Agile principles with cloud systems and business automation. These findings reveal the best ways to develop digital capabilities in telecom software and show how combining technology and processes brings long-term business advantage.

Contributions

Saad Zafar: Problem Identification, Literature search

Irfan Jawaid Nagi: Drafting and data analysis, proofreading and editing

Sherif Misheal Costantin: Methodology, Data Collection

Conflict of Interests/Disclosures

The authors declared no potential conflicts of interest w.r.t this article's research, authorship, and/or publication.

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