

The Intersection of IT and Business Strategy: Exploring the Impact on SME Performance

Aprajita Seth

Business System Analyst, We Work

Abstract:

Researchers and professionals are increasingly focusing on strategic IT-business alignment, as it has been found to have a positive impact on the performance of SMEs. The strategic Alignment Model (SAM) is a comprehensive framework for achieving IT-business alignment that was developed in 2000. It combines multiple perspectives on alignment to provide a unique and valuable view. Although SAM has been widely adopted in Western IT studies, there is a lack of research on its implementation in the USA. In this research, we explore how three styles of alignment - communication, governance, and competency - impact small and medium-sized enterprises in the USA. Our survey, which includes input from 230 managers and IT employees, suggests that all three alignment styles have positive effects on SME performance. We discuss the significance of these findings for both theory and implementation, and recommend areas for additional research.

1. Introduction:

Experts recognize the importance of aligning IT and business strategies, as revealed by various studies (Gerow et al., 2015; Luftman & Ben-Zvi, 2011; Orozco et al., 2015). Achieving this alignment can spur innovation, enhance efficiency, and generate a competitive edge (Alaceva & Rusu, 2015; Chen et al., 2010; Ravishankar et al., 2011). Conversely, disregarding this crucial connection could result in poor financial performance and reduced organizational effectiveness, wasting valuable resources. Alaceva and Rusu (2015) state that IT-business alignment measures how much the IT strategy supports the organization's purpose, goals, and strategies. Make sure your IT strategy supports your business goals for optimal results. Majstorović (2016) suggests that IT management is a type of organizational

management. Mosthaf and Wagner (2016) argue that IT strategic alignment occurs when the associated information structures of a company and its practices and objectives are in harmony. Liang et al. (2017) propose that precise alignment involves the implementation of IT that fits the company's strategic plans, priorities, and requirements. Benbya and McKelvey (2006), however, contend that IT and business strategy's very close coordination can lead to lower competitive stability and an unwillingness to adapt to environmental changes. To address the challenge of achieving IT-business coordination, specific frameworks have been developed that are reliable, relevant, and possess robust psychometric properties. Luftman (2000) developed the Strategic Alignment Model (SAM) as a foundation for further research in this area (Coltman et al., 2015; Gutierrez et al., 2015). However, the applicability of SAM to Middle Eastern organizations remains uncertain because few studies have been conducted on the topic (see Alyahya and Suhaimi, 2015).

To achieve success in business, effective communication is essential for establishing a strong connection between IT Business Alignment and a company's performance. Unfortunately, small to medium-sized businesses in the US face many communication challenges. IT executives lack communication channels, and there's a shortage of formal networks to share experiences with other departments, thus coordination problems can arise. Furthermore, in some cases, top management can dominate decision-making. Adding to the issue is the absence of a website or page to promote their products and provide information about their company background. Lastly, IT competency is undervalued in the US which results in IT cost being prioritized. SMEs are more concerned about cost rather than the benefits of applying IT business alignment to their business. Additionally, internal and outsourced IT may lead to lower productivity measures, as there is a lack of direct link between the company and IT metrics, along with inconsistent internal and external benchmarking. The government also does not provide sufficient support to encourage SMEs to adopt modern IT practices. As emphasized, there needs to be a greater focus on IT and business perspective in comparison to other countries.

Considering the challenges mentioned above, it is essential to explore how Competency impacts the performance of small and medium-sized enterprises (SMEs) in the United States. SMEs based in Baghdad face various issues while running their businesses, such as inadequate integration between IT and non-IT functions and a lack of awareness of customer needs among

non-IT departments. Although IT personnel understand the significance of technology in businesses, other departments concentrate solely on performing their duties without realizing the benefits of IT adoption to improve their skills and enhance the company's overall performance. Collaborations between businesses also have a vital part in achieving success, but the responsibilities and positions of businesses and IT personnel are frequently ambiguous during preparation and execution. Therefore, SMEs in the United States face many challenges. Disputes and mistrust often arise between companies and IT managers, and the cost and benefit-sharing between companies and IT are usually separate. These challenges lead to IT not being considered a business partner. Thus, it is crucial to investigate the impact of partnerships on the performance of SMEs in the United States. The objective of this study is to review the roles of communication, governance, competency, and partnerships as factors for aligning IT with businesses in companies.

2.Literature Review:

2.1 Small and Medium Enterprises (SMEs) Performance:

This study's fundamental framework revolves around the assessment of SMEs' output, which is vital to strategic management and the concept of the company itself (Santos & Brito, 2012). However, due to its complexity and multi-dimensional nature, there is no agreed-upon definition of corporate performance. Academic researchers have identified a range of metrics to evaluate the success of small and medium-sized enterprises (SMEs), divided into objective and subjective categories. In this section, we will go into these different metrics of SME performance in detail. Martin et al. (2017) classified SME performance into three types: financial performance, productivity, and customer benefit. Financial performance refers to the company's potential to generate more income by increasing its competitive advantage. Productivity measures the contribution of input processes to output. Customer benefit is the total benefit received by stakeholders from using a particular IT service offering (Brynjolfsson & Hitt, 2000). (Ashrafi & Mueller, 2015; Belderbos et al., 2004; Luftman et al., 2017). The key to successful IT investments is alignment between IT businesses and the entire organization. This alignment can be demonstrated through tangible results and is crucial to achieving success. Small and medium-sized enterprises (SMEs) are a cornerstone of management research, and a business's performance falls into two categories: financial output and organizational performance. Financial output includes profit, return on assets, and expenditure gain, while organizational performance includes sales, market position, and total

return on investments. For SMEs, performance is gauged through top management's viewpoint on their perceived approach to performance, using a Likert-like scale. Although various metrics measure financial efficiency, the financial ratio remains the most commonly used standard of performance measurement in finance and inference statistics.

2.2 Communication:

Effective communication is essential for alignment, and it's successful when the message is understood by the receiver as intended by the sender. With the emergence of information and communication technologies (ICT), we've witnessed significant changes in supply chain management (SCM) practices, leading to positive outcomes in managing equipment. The use of ICT has also had a positive effect on the success of small and medium-sized enterprises (SMEs), but it's subject to various socio-economic conditions, impacting the preference for such technologies in the business district. Rufai (2014) notes that the role of communication technologies in promoting business performance and local economic growth may vary.

To foster corporate synergy, it is important that individuals comprehend their roles and responsibilities. At an operational level, it is crucial for business units to share a common view on the processes needed to achieve operational objectives that align with overall business goals (Tarhini, Naji, & Masa'deh, 2015). Management should communicate the necessary requirements to support specific functions, and through IT processes, management can facilitate synergy in business processes (Rath, 2018).

Communication is widely acknowledged as one of the critical factors in achieving IT-business alignment, enabling organizations to achieve high performance. Scholars such as Luffman (2000), Poelen, Stamper et al. (2012) have identified communication as one of the essential factors linking IT-business alignment with SME performance. Other researchers, including Helaly (2012), Naidoo (2011), Gutierrez et al. (2009), and Sledgianowski & Luftman (2005), have similarly claimed that effective communication is a key predictor of organizational success. Therefore, communication is a vital factor due to its significant role in IT-business alignment, as highlighted by various scholars.

Section 2.3 - Governance

IT governance refers to the framework used to determine the role of IT in an organization, and how IT help's in achieving business objectives. It is essential to report on the implementation of other tasks and define objectives in order to strengthen them. There are four potential areas that could be contributing to the discrepancy between IT and business, which includes leadership, structure, level of service, process, and principles. The IT and business managers' governance role can cause these problems, and therefore, the connection between them should be strengthened to integrate IT strategy and plans effectively. Ensuring quality is crucial to satisfy stakeholders when undertaking IT initiatives. Implementing ITIL can help address some of the problems that create a gap in IT and business alignment. A framework outlines the structure, quality, and adoption of technical services in an organization.

IT governance initiatives can attain operational excellence by using IT outputs to support non-IT business functions and processes. The IT capacity maturity model aims to enhance efficiency across business domains by optimizing processes that are well-defined, documented, and repeatable. Many researchers have identified governance as a critical factor linking IT business alignment and MEs performance, leading to a successful company.

Therefore, governance plays an essential role in organizations.

2.4 Competency

Organizations need internal records such as accounting reports, manufacturing expenses, and efficiency of their goods. However, they also require external environmental information like competitions, buyers, and vendors to understand and meet their consumers' needs efficiently and quickly, thus achieving strategic advantages in a sustainable environment. This is why IT competency is crucial. IT abilities refer to how organizations use technology to manage information successfully, rather than just the programs, computers, and telecommunications themselves. Information holds great significance in the global marketplace, with increasing importance every day. Effectively managing resources and procedures through IT competence is essential in today's digital age.

Unique resources emerge without interest towards a single market setting, which makes competencies incomparable from a resource-based viewpoint. This uniqueness could be the foundation for a competitive advantage. Organizations with higher IT skills are considered

superior in managing "invisible assets" that lead to market leadership. The use of marketing literature, strategy, and IT to enhance information management competency of an IT company can build IT skills.

Many believe that businesses consist of IT-related components, such as applications, equipment, and personnel. The amalgamated trio of IT proficiency dimensions - IT expertise, IT management, and IT infrastructure - encompasses resources that showcase an enterprise's ability to recognise and utilize necessary IT technologies and procedures for handling business and customer data.

2.5 Partnership

A number of practical experiments have been conducted to examine the relationship between business performance and partnership, with various outcomes. Stuart (2000) conducted a study that focused on the technology industry and explored the benefits of portfolio collaborations in innovation and development. The report concluded that companies with broad and creative partnerships tended to have more reliable outcomes than those without. The report also proposed two models for further testing. According to the research conducted by Jonathan and Soldi (2011), collaborations are considered successful when they achieve their objectives and lead to financial gains for both parties involved. While the study mainly focused on the service industry, it recommended further investigation to extend the results to other sectors as well. Discover the impact of strategic partnerships between small and big businesses in Equity Bank's case study by Kudate (2014). Despite being viable, small businesses require increased information before exploring collaborations. The author suggested further research on the governance and operation of such organizations. After evaluating Equity Bank and its partners' decision-making collaborations, Walekhwa (2011) recommended additional investigations into agency banking's effects. Despite previous studies, there are still knowledge gaps that need further analysis to better comprehend how partnerships are structured and how organizations react to varying needs.

2.6 Development of Hypotheses and Research Framework:

The SAM (Luftman, 2000) is the basis for the conceptual framework and hypotheses presented in this study.

Research indicates that implementing the strategic alignment model (SAM) can greatly improve the performance of small to medium-sized enterprises (SMEs) in the United states. Our study focuses on four important hypotheses: The impact of IT business alignment factors on SME performance varies depending on the quality of communication, governance competency, and partnership.

Discovering how different factors affect SME performance is important to continually improve their operations. The study explores several direct influences that can impact SMEs, such as communication, government policies, competencies, and levels of service. These alignment factors have already been verified through previous studies, and this research aims to examine their direct influences further. By presenting accurate and relevant information, we can help SMEs make better-informed decisions to enhance their financial performance.

After examining the data, the following hypotheses have been formulated to explain the factors impacting SME performance:

1. **H1: Communication**: effective communication practices have substantial impact on the success of SMEs.
2. **H2: Governance**: Having good governance structure and practices contribute significantly to SME performance.
3. **H3: Competence**: high levels of competence in employees and leadership are a critical factor in SME success.
4. **H4: Partnership**: strategic partnerships with other businesses influence SME performance in noteworthy ways.

These hypotheses will be further tested through research and analysis.

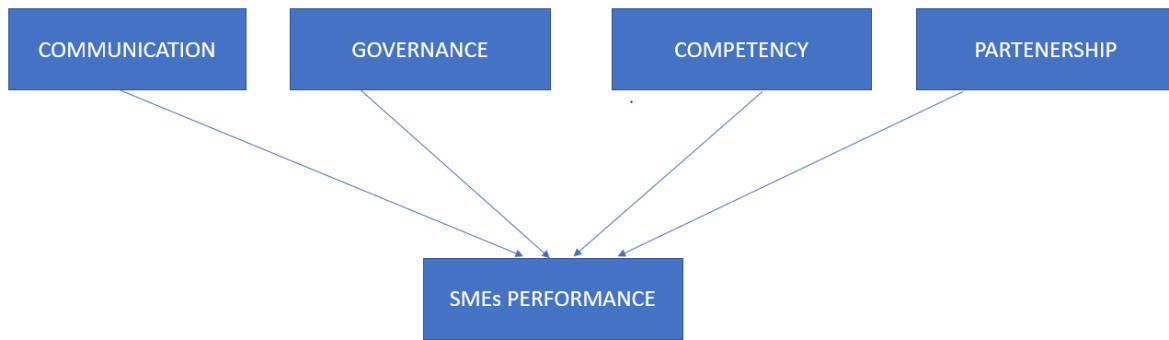


Fig: Maximizing SMEs Performance through IT Business Alignment Model

3.Methodology

Researching the Correlation Between IT Business Factors and SME Performance in usa. In this study, we aim to identify the relationship between key IT business alignment factors (including communication, governance, competency and partnership) and SMEs' performance in the United states. Using a deductive approach for hypothesis testing and quantitative research methods, we will carefully analyze collected data from a cross-sectional survey conducted via questionnaire. Our purpose is to establish a suitable model for understanding the correlation between these key variables, and to ultimately provide valuable insight into how SMEs can improve their performance.

We collected important data through a survey to understand a phenomenon among SME owner-managers and IT personnel. The survey utilized a Likert scale-style questionnaire with measurement scales based on past research and literature reviews. Likert scales are commonly used in social science research and are ideal for surveys completed by individuals. But, keep in mind that modifying the questionnaire can affect its reliability and validity, even though it can be altered for this particular study.

The survey used in this study collects information on the participants' demographics and their perspectives on small and medium-sized enterprise (SME) performance. It also includes questions about the independent variables, specifically the dimensions that measure the

alignment of IT business factors such as communication, governance, competency, and partnership. The researchers utilized a structured survey approach for data collection based on the information and variables' measurement analyzed.

This section provides information about the companies that took part in the research. Our study focuses on services SMEs that have implemented e-commerce. Specifically, we will be collecting data from owners, managers, and IT staff to gain insights into their experiences with e-commerce adoption. Various characteristics of the participants were examined, including gender, age, position level, company size, education level, marital status, and years of work experience. The participants' profile was analyzed using SPSS software version 22.0.

We analyzed the profiles of 230 participants in our research. The gender breakdown revealed that 81.2% were males, while females made up only 18.8%. When it came to age, the largest group (31%) were between 44 to 54 years old. Participants above 55 years old accounted for 26%, followed by 19.4% between 35 to 44 years old. Those between 25 to 34 years old made up 15.4% while the smallest percentage (7.8%) were respondents younger than 26 years old.

The study considered the respondents' job levels and found that managers represented 23.8%, IT staff represented the majority at 54.6%, and owners were least represented at 21.8%. Moreover, the size of the company and the education level of the respondents were also evaluated. It was found that most of the respondents (62.5%) came from small companies, while 37.5% of the respondents were from medium-sized companies. As for education level, most respondents (62.2%) had a Bachelor's degree, 24.6% had a certificate or diploma, 1.3% held a Master's degree, and 2.2% were certified as a Ph.D. holder. Out of all the participants, only 9.9% had a secondary school certificate. In regards to marital status, the study found that the majority of participants (85.6%) were married, while 13.5% were single and 1.4% were divorced. None of the respondents claimed to be a widow.

Out of the 230 participants, the majority of respondents (30.1%) had worked for 11 to 15 years, followed by 24.7% who had 7 to 10 years of work experience. 29.8% of the respondents had worked for 15 to 20 years. Only a small percentage (9.1%) had worked for 5 years, and an even smaller minority (6.4%) had worked for 18 years or more. The data collected from all 230 participants were examined reliably and the instruments employed were found to be reliable as

well. The reliability of all items was checked using Cronbach's Alpha. For the sample with N = 230, the corresponding alpha values of Cronbach are seen in the following table.

Table 2:

Values of Cronbach’s Alpha			
No.	Variables	Cronbach’s Alpha	Average Variance (AVE)
1	Governance	0.892	0.714
2	Communication	0.891	0.685
3	partnership	0.916	0.726
4	Competency	0.887	0.678
5	Sme performance	0.869	0.701
Note: To guarantee convergence validity, every item must possess an AVE value of at least 0.50.			

Table 2 shows that all items in the analysis have achieved a robust Cronbach Alpha, with scores above 0.7. This means that the scales used in the analysis are reliable and can be used to test the model. To ensure a robust measurement model, we evaluated convergent and discriminant validity using the AVE, Composite Reliability (CR), and Factor Loading evaluation criteria proposed by Hair et al. (2010).

Based on our analysis, all constructs exceeded the required AVE threshold of 0.5, with values ranging between 0.695 to 0.740. Additionally, the average load of 0.7 or higher, and CR of 0.7 or higher indicate good convergent validity. These results confirm that the measurement model used in our sample is valid.

To maintain distinguishing validity, we evaluated discriminant validity using the Fornell-Larcker criterion. Through our analysis, we ensured that the measurement model performs as expected, with lower correlations between latent variable correlations (LVCs) and any other latent variables. Our analysis is presented in Table 2, which includes the AVE root square for IT alignment aspects (communication, governance, competencies, and partnership) and the performance of small and medium-sized companies.

Overall, our comprehensive analysis demonstrates the robustness and validity of our measurement model, making it a valuable tool for future research in this field.

Table 3

Criterion of Fornell- Larcker					
	Communication	Competency	Governance	Partnership	SMEs performance
Communication	0.933				
Competency	0.828	0.911			
Governance	0.934	0.894	0.934		
Partnership	0.909	0.855	0.917	0.944	
SMEs performance	0.837	0.710	0.859	0.794	0.889

A recent study focused on the impact of IT variables - communication, governance, competency, and partnership - on SME performance. Using SmartPLS 3.0, the study validated proposed hypotheses through a structural model evaluation.

To accept the suggested model, required a path coefficient of at least 0.1 with a reasonable coefficient of at least 0.05 at a confidence level of 94%. The bootstrapping procedure assessed the significance and acceptance of hypotheses based on t-values obtained from 230 re-samplings for all constructs.

The study's results, presented in Table 4, showed that all four hypotheses surrounding the direct effect had a significant positive influence. The positive impact of communication (t=234.145; p<0.001), governance (t=166.160; p<0.001), competency (t=105.485; p<0.001), and partnership (t=79.885; p<0.001) on SMEs' performance was evident in the analysis.

For a hypothesis to be supported and accepted, the t-value had to be more significant than 1.96.

Overall, the study's findings suggest that IT variables have a positive impact on SME performance, which could have important implications for businesses looking to enhance their operations.

Table 4:

Hypothesis testing results:						
No	Relationship	Path Coefficient	Standard Deviation(S TDEV)	T Statistics (O/STDEV)	p-value	Decision
Hypo1	COM→Smes performance	0.977	0.004	231.145	0.000	Supported
Hypo2	GOV → SMEs performance	0.970	0.006	165.170	0.000	Supported

Hypo3	COMP → SMes performance	0.953	0.009	101.485	0.000	Supported
Hypo4	PAR→ SMES performance	0.940	0.012	79.885	0.000	Supported

“COM→communication, GOV → governance , COMP → competency, PAR → Partnership”.

5.Conclusion

The alignment between IT and business has emerged as a crucial topic in the realm of marketing. Practitioners and theorists have taken a keen interest in this area and its implications for small and medium-sized enterprises (SMEs). Recent studies have found that SMEs' performance is significantly influenced by their IT-business alignment factors. These factors include communication, governance, competency, and partnership.

Therefore, as an SME, it is essential to consider these factors as useful marketing tools to enhance your business's success in the USA. The statistical analysis confirmed that primary research hypotheses were accepted, indicating that IT-business alignment factors have a positive impact on SMEs' performance towards products or businesses.

Investing in IT-business alignment provides a powerful edge for SMEs to establish a successful marketing strategy, helping you stay ahead of the competition. So, if you want to take your SMEs marketing success to the next level, incorporating IT-business alignment factors should be on your radar.

Despite the study's success, there are limitations, and suggestions for future research are provided based on these limitations. This research contributes to the marketing field by analyzing the relationship between IT-business alignment factors and SME outcomes in the United states. Ensuring SMEs' performance is critical for building sustainable competitive advantages. Discover the Keys to Boost Your SME's Performance with IT Alignment! Our study focuses on the crucial role of IT-business alignment in enhancing small and medium-sized enterprises' overall performance. Join us as we explore the key factors that can maximize

your business's success and uncover the secrets to leveraging the power of IT alignment. Don't miss out on this opportunity to improve your SME's performance in the USA!

The research results have practical and theoretical implications, as a higher degree of IT-business alignment significantly affects SMEs' efficiency. Customers' perceptions of IT-business alignment are also essential and have implications for customer satisfaction and repeat business. Therefore, if SMEs increase their IT-business alignment, customers will develop favorable attitudes, resulting in increased satisfaction and loyalty.

Discover how small and medium-sized enterprises (SMEs) can leverage IT-business alignment to boost their bottom line. Our research highlights the key factors driving SMEs' performance in today's competitive landscape. Gain insights to build a sustainable advantage through IT-business alignment. This will positively influence customers' perceptions of SMEs, resulting in improved business outcomes.

References:

1. Adnan, N. M., and Dian Indrayani Jambari. "Mutual understanding determinants for effective communication in business and IT strategic alignment planning." *International Journal on Advanced Science, Engineering and Information Technology* 6, no. 6 (2016): 914-921.
2. Ahmed, Saad Mahmood, Mohamad Shanudin Zakaria, and Mohammed Alaa H. Altemimi. "CSFs of electronic information sharing in Iraqi SMEs." *Journal of Engineering and Applied Sciences* 11, no. 8 (2016): 1846-1850.
3. Alaceva, Carolina, and Lazar Rusu. "Barriers in achieving business/IT alignment in a large Swedish company: What we have learned?." *Computers in human behavior* 51 (2015): 715-728.
4. Alkhaffaf, Haetham H. Kasem, Kamil Md Idris, Akilah Abdullah, and Al-Hasan Al-Aidaros. "The influence of technology readiness on information technology competencies and civil conflict environment." *Indian-Pacific Journal of Accounting and Finance* 2, no. 2 (2018): 51-64.
5. Al-Lamy, H. A., Bakry, M. H., Raad, W., Al-Shami, S. A., Alaraji, Z. J., Alsa-Lihi, M. W., & Al-Tameemi, H. M. (2018). Information technology infrastructure and small medium enterprises' in Iraq. *Opcion*, 34(86), 1711-1724.

6. Alvarez-Suescun, Emilio. "Testing resource-based propositions about IS sourcing decisions." *Industrial Management & Data Systems* 107.6 (2007): 762-779.
7. Alyahya, Majed, and Mohd Adam Suhaimi. "A conceptual model for business and information technology strategic alignment from the perspective of small and medium enterprises." *International Journal of Business, Humanities and Technology* 3, no. 7 (2013): 83-90.
8. Ashrafi, R., & Mueller, J. (2015). Delineating IT resources and capabilities to obtain competitive advantage and improve firm performance. *Information Systems Management*, 32(1), 15-38.
9. Bandiera, Luca, Vandana Chandra, Jasmine Crystal Fosque, Jan Von Der Goltz, Teresa Anna Maria Peterburs, Nadia Fernanda Piffaretti, Joseph P. Saba, Collette Mari Wheeler, Middle East, and North Africa. "Jobs in Iraq: a primer on job creation in the short-term." *Disclosure* (2018).
10. Bassellier, G., & Benbasat, I. (2007, April). Assessing the Contributions of Business and IT Knowledge to the Development of IT/business Partnerships. In *Proceedings of the 2007 ACM SIGMIS CPR conference on Computer personnel research: The global information technology workforce* (pp. 203-206).
11. Belderbos, R., Carree, M., & Lokshin, B. (2004). Cooperative R&D and firm performance. *Research policy*, 33(10), 1477-1492.
12. Brynjolfsson, E., & Hitt, L. M. (2000). Beyond computation: Information technology, organizational transformation and business performance. *Journal of Economic perspectives*, 14(4), 23-48.
13. Buallay, A., Hamdan, A., & Zureigat, Q. (2017). Corporate governance and firm performance: evidence from Saudi Arabia. *Australasian Accounting, Business and Finance Journal*, 11(1), 78-98.
14. Coltman, T., Tallon, P., Sharma, R., & Queiroz, M. (2015). Strategic IT alignment: twenty-five years on. *Journal of Information Technology*, 30(2), 91-100.
15. De Haes, S., & Van Grembergen, W. (2005, January). IT governance structures, processes and relational mechanisms: Achieving IT/business alignment in a major Belgian financial group. In *Proceedings of the 38th Annual Hawaii International Conference on System Sciences* (pp. 237b-237b). IEEE.
16. Debreceny, R. S., & Gray, G. L. (2013). IT governance and process maturity: A multinational field study. *Journal of Information Systems*, 27(1), 157-188.

17. Dillman, D. A., & Smyth, J. D. (2007). Design effects in the transition to web-based surveys. *American journal of preventive medicine*, 32(5), S90-S96.
18. Femi, A. F. (2014). The impact of communication on workers' performance in selected organisations in Lagos State, Nigeria. *IOSR Journal of humanities and Social Science*, 19(8), 75-82.
19. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
20. Gerow, J. E., Thatcher, J. B., & Grover, V. (2015). Six types of IT-business strategic alignment: an investigation of the constructs and their measurement. *European Journal of Information Systems*, 24(5), 465-491.
21. Glazer, R. (1991). Marketing in an information-intensive environment: strategic implications of knowledge as an asset. *Journal of marketing*, 55(4), 1-19.
22. Gutierrez, A., Orozco, J., & Serrano, A. (2009). Factors affecting IT and business alignment: a comparative study in SMEs and large organisations. *Journal of Enterprise Information Management*, 22(1/2), 197-211.
23. Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. saGe publications.
24. Espinosa, J. A., & Ortinau, D. J. (2016). Debunking legendary beliefs about student samples in marketing research. *Journal of Business Research*, 69(8), 3149-3158.
25. Harash, E., Al-Timimi, S., & Alsaadi, J. (2014). The influence of finance on performance of small and medium enterprises (SMES). *technology*, 4(3), 161-167.
26. Helaly, M. (2012). *The impact of IS/IT strategy and business strategy alignment on business performance in the Palestinians firms* (Doctoral dissertation).
27. Henderson, J. C., & Venkatraman, H. (1999). Strategic alignment: Leveraging information technology for transforming organizations. *IBM systems journal*, 38(2.3), 472-484.
28. Héroux, Sylvie, and Anne Fortin. "The moderating role of IT-business alignment in the relationship between IT governance, IT competence, and innovation." *Information Systems Management* 35, no. 2 (2018): 98-123.
29. Homburg, C., Wielgos, D., & Kühnl, C. (2019). Digital business capability and its effect on firm performance. In *AMA Educators' Proceedings* (Vol. 30, pp. ICM-2). American Marketing Association; Curran.

30. Huo, Baofeng, Yuxiao Ye, Xiande Zhao, and Yongyi Shou. "The impact of human capital on supply chain integration and competitive performance." *International Journal of Production Economics* 178 (2016): 132-143.
31. Hutchinson, Marion, and Ferdinand A. Gul. "Investment opportunity set, corporate governance practices and firm performance." *Journal of corporate finance* 10, no. 4 (2004): 595-614.
32. Itami, Hiroyuki, and Tsuyoshi Numagami. "Dynamic interaction between strategy and technology." *Strategic Management Journal* 13, no. S2 (1992): 119-135.
33. Jonathan, C. D., and A. Soldi. "Strategic alliances; organizational performance measurement in the financial services industry; the beneficial life insurance SA and microfinance institutions in Cameroon." *Unpublished MBA project, Linkoping University* (2011).
34. Keen, Deb. "Parents, families, and partnerships: Issues and considerations." *International Journal of Disability, Development and Education* 54, no. 3 (2007): 339-349.
35. Kudate, V. N. "Study on the influence of strategic partnerships between small and large businesses in organizational performance; the case of Equity Bank Agency banking." *Unpublished MBA project. Nairobi: University of Nairobi* (2014).
36. Kumar, Sameer, and Ralph Harms. "Improving business processes for increased operational efficiency: a case study." *Journal of Manufacturing Technology Management* 15, no. 7 (2004): 662-674.
37. Lacerda, Thaísa C., and Christiane Gresse von Wangenheim. "Systematic literature review of usability capability/maturity models." *Computer Standards & Interfaces* 55 (2018): 95-105.
38. Lai, Fujun, Xiande Zhao, and Qiang Wang. "The impact of information technology on the competitive advantage of logistics firms in China." *Industrial Management & Data Systems* (2006).
39. Lei, David, Michael A. Hitt, and Richard Bettis. "Dynamic core competences through meta-learning and strategic context." *Journal of management* 22, no. 4 (1996): 549-569.
40. Liang, H., Wang, N., Xue, Y., & Ge, S. (2017). Unraveling the alignment paradox: how does business—IT alignment shape organizational agility?. *Information Systems Research*, 28(4), 863-879.

41. Luftman, Jerry, and Tal Ben-Zvi. "Key issues for IT executives 2011: Cautious optimism in uncertain economic times." *MIS Quarterly Executive* 10, no. 4 (2011): 7.
42. Luftman, J., Lyytinen, K., & Zvi, T. B. (2017). Enhancing the measurement of information technology (IT) business alignment and its influence on company performance. *Journal of Information Technology*, 32(1), 26-46.
43. Majstorović, Danijela. "(Un) doing feminism in (post)-Yugoslav media spaces." *Feminist media studies* 16, no. 6 (2016): 1093-1108.
44. Marrone, Mauricio, and Lutz M. Kolbe. "Uncovering ITIL claims: IT executives' perception on benefits and Business-IT alignment." *Information Systems and e-Business Management* 9 (2011): 363-380.

Bridging the Gap: Strategies for Improving the Public Transport for People with Disabilities

Vasav Desai

Resident Engineer, Naik Consulting Group, PC

Abstract:

People living with physical disabilities are often faced with major mobility issues, which emphasizes the need for convenient access to public transportation. A study in New Jersey used a two-step sampling process involving carefully selected and randomly chosen 232 students from three special education centers across the state. The findings exposed several obstacles such as operator impatience/discrimination, long wait times, and lack of help that prevented users from successfully taking advantage of local transit options. The research revealed that people with disabilities have different transportation requirements, as confirmed by a chi-square value of 37.314 ($p < 0.05$). These results highlight the need for the government to take immediate action to ensure that disabled individuals have equal access to transport services. This includes consulting with them on their infrastructure needs and assessing any modifications made. Additionally, it's crucial to provide sustainable transport options that cater to their unique needs and improve their quality of life by promoting independence and dignity.

Introduction:

Physically-challenged individuals face a major obstacle in terms of mobility, especially when it comes to using public transportation, which is essential for their independence. It enables them to access education, healthcare, employment, leisure activities, and other aspects of community living. For those who cannot use conventional public transportation, paratransit services are crucial. Disabled people are often ridiculed, exploited, and ostracized, with fewer opportunities compared to non-disabled people. The existing public transportation system is

not accessible for physically-challenged individuals due to discrimination, inconvenient bus stops, and difficulty in reading timetables or signage.

Intermediate Public Transport Services (IPTs) offer personalized services, convenient door-to-door services, and generate employment opportunities. Since IPTs are demand-responsive, physically-challenged individuals tend to use them due to the minimal accessibility problems. Despite advances in the ride-hailing industry, customers still report challenging experiences with scheduling delays, inadequate driver attitudes and missed pick up appointments.

Accessibility is crucial for transportation and is directly related to mobility. Offering reliable transportation is essential for individuals to have maximum access to job opportunities, educational resources, and societal engagement. This study focuses on the major adversities disabled people face when trying to use public transport services, as well as examining whether or not certain types of disabilities cause more difficulty accessing such services.

Literature review:

To participate in their community, people need access to transportation for essential activities like employment, shopping, healthcare, education, and socializing [18]. People who have difficulty accessing transportation, including the elderly, those with disabilities, and those with lower socioeconomic status, are considered "transportation disadvantaged" [27]. These groups have less access to important resources like employment, education, and healthcare, which limits their ability to participate in their community and can lead to social exclusion [24][5].

Social exclusion is a major concern for people with physical disabilities, as it prevents them from participating in activities and accessing services, goods and opportunities that are fundamental to belonging in society [23]. In 2014, 9% of people aged 17 or older in the U.S faced mobility challenges that inhibited their ability to take part in everyday activities and pursue job opportunities - a number significantly lower than those who did not experience such difficulty [23]. Without programs designed for accessible transportation, disabled individuals may be excluded from potential employment options they would otherwise have explored [4].

The concept of accessibility can be difficult to define and measure. Some authors define it as the ease of reaching necessary services and destinations. According to Ref. [3], accessibility is

related to physical proximity and the ease of reaching places that offer opportunities for desired activities. Access and mobility are closely related in transportation. Mobility is the measure of human agency in moving themselves and goods around, dependent on available transport and individual characteristics.

Accessibility is a crucial element of transportation, and lack of accessibility can disempower individuals from decision-making in housing, job opportunities, services, quality of services, and the ability to make changes in their lives. Individuals with disabilities are particularly vulnerable to lacking access to transportation, leading to limited participation in their community. This lack of access also affects their ability to access services, education, and social interaction necessary for healthy living.

Once again, providing individuals with disabilities with transportation access has been widely acknowledged as a primary means to enhance their independence and self-determination [13]. Accessibility for individuals with disabilities is a crucial factor in ensuring their full inclusion in society. However, transport services are often limited - whether due to availability, frequency or cost – and can impede their ability to participate socially. It's imperative that we understand the profound impact of transportation access on social exclusion so proper measures may be taken towards more equitable participation by all members of our community.

People with disabilities can overcome transportation barriers by using their social networks to become more connected to their community. However, relying on these resources can create an additional burden for those who already face limited mobility and social interactions. Discrimination and exclusion also pose significant challenges for accessible transportation for disabled individuals.

Policy makers in countries have not given enough importance to transportation as a key factor in improving the lives of disabled people, despite its importance in building sustainable communities [8]. Social exclusion resulting from discrimination is a serious issue, and it can have devastating effects on individuals such as low self-esteem, poor social relationships that lead to isolation and depression, or even resorting to self-harm..

Disabled people need physical accessibility, but they often find public transportation inaccessible and inflexible, which makes it difficult for them to make spontaneous travel choices [6].

The mobility of less mobile individuals is often hindered by various roadblocks. These include boarding and alighting vehicles, drivers not waiting for passengers to sit before embarking on the journey, a lack of assistance in getting off/on public transport, inconvenient bus stops with no shelter from extreme weather conditions, and long wait times due to difficulty reading timetables or signage at tram/bus stations.

IPTs offer a viable solution to the accessibility issues which plague many transport services. Though scheduling, wait times, and driver behaviors may be less than desirable in some cases, these systems remain attractive due to their unparalleled flexibility with regard to meeting the operation demands of diverse marketplaces. This flexibility allows them to easily modify their frequencies, rates, timings, and operations.

III. METHODOLOGY:

Through the use of a multi-stage sampling technique, this research was conducted in the United States. After carefully selecting three special educational centers as part of their first stage, they went on to randomly select 227 students from two more centers for further assessment. Out of these respondents, 191 copies were returned and found ready to be analyzed - making it an incredibly successful study.

Data was methodically reviewed using a range of statistical approaches. Descriptive procedures including frequencies, percentages and contingency tables were employed to establish an overall picture while inferential methods such as Chi-square provided validation of the results.

IV Result and Discussion

Table 1: Factors affecting physically challenged disabled people.

Frequency	Percentage
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Problems faced during boarding and alighting	16	8.3
Wait time	43	22.9
Inconvenience faced at Bus Stop	20	10.4
Operator discrimination	46	24.0
Information Reading	14	7.3
Difficulty faced during order placing	16	8.3
Lacking assistance in accessing vehicle	36	18.7
Total	191	100.0

"Table 1 shows that physically challenged individuals face three main obstacles when accessing IPTs, namely: impatient or discriminatory operators (24%), waiting time (22.9%), and lack of assistance in boarding vehicles (18.7%). However, 37.5% of the respondents identified other factors that hinder their access to IPTs, including difficulty in reading signage and information, challenges in boarding and alighting from vehicles, inconvenient location of IPTs/bus stops, operator's impatience/discrimination, and difficulty in placing orders."

Hypothesis Test:

H1: The degree of challenges faced by disabled people in accessing IPTs is not determined by their disability.

Test 1: Cross-Tabulation:

Using Crosstabulation										
			Accessibility factors for disabled individuals with ITP							Total
			Problems faced during boarding and alighting	Wait time	Bus stop location	Operator Impatience	Reading of information	Order placing	Lacking Assistance	
		Counting	9	27	9	7	9	7	20	88
Disability Nature	Visual Impairment	% of this disability	10.22%	30.6%	10.22%	7.9%	10.22%	7.9%	22.7%	100%
		Counting	10	14	8	24	6	17	19	98
	Hearing Impairment	% of this disability	9.8%	14.2%	8.1%	24.4%	6.1%	17.3%	19.3%	100%
		Counting	20	67	5	37	18	12	27	186
Total		% of this disability	10.7%	36.0%	2.6%	19.8%	9.6%	6.4%	14.5%	100%
Source: Computational Research										

The results showcased in Table 2 reveal that an abundance of challenges exists for both those with visual and hearing impairments when accessing Integrated Public Transport (IPT). Major difficulties identified by the visually impaired include waiting time (35.4%) and lack of assistance (19.2%), while other issues such as difficulty reading information, operator impatience, absence of bus stops, and boarding/alighting complications also contributed to

45.3%. For respondents struggling with auditory disabilities on the other hand, a majority pointed towards operator impatience at 37.8%, followed by 15% lamenting unavailability of help; further intricacies involving waiting times confusing location points for bus halts ordeals encountered during the ordering process or challenging boardings were commonly encountered to only 4% facing problem-related to accessibility through digital means due to illiteracy was observed overall amongst this demographic group.

Test 2: Pearson Chi-Square Test:

Table: Chi- Square Tests

	Value	Degree of freedom	significance
Pearson Chi -Square+	31.618	7	.000
Likelihood Ratio	35.763	5	.000
Linear by Linear Association	1.491	2	.217
N of Valid Cases	186		

Source: Computational Research

The Pearson Chi-Square table reveals a statistically significant relationship between the challenges experienced by individuals with physical disabilities when accessing IPTs, and the type of disability. This is evidenced in an Asymptotic Significance (2-sided) value of less than 0.05; thereby providing support to accept the alternative hypothesis proposed.

Conclusion and Recommendation:

To ensure accessible transport for all, people-oriented mobility planning must replace vehicle-centered approaches. While it is important to take into account the diverse needs and challenges

of those with physical disabilities when improving infrastructure, genuine progress will only be made if their voices are listened to in both design and implementation phases as well as during appraisal periods; this could help identify sustainable solutions tailored towards a variety of disability groups. With these measures put into place and greater awareness toward understanding access requirements for each unique case raised across society, everyone can benefit from an inclusive traveling experience which no longer discriminates against any individual's impairment or situation.

References:

1. Aworemi, J. R., Salami, A. O., Adewoye, J. O., & Ilori, M. O. (2008). Impact of socio-economic characteristics on formal and informal public transport demands in Kwara state, Nigeria. *African Journal of Business Management*, 2(4), 72-76.
2. Bezyak, J. L., Sabella, S. A., & Gattis, R. H. (2017). Public transportation: an investigation of barriers for people with disabilities. *Journal of Disability Policy Studies*, 28(1), 52-60.
3. Bryceson, D. F., Mbara, T. C., & Maunder, D. (2003). Livelihoods, daily mobility and poverty in sub-Saharan Africa. *Transport reviews*, 23(2), 177-196.
4. Ajayi, J., Aworemi, R., Wojuade, C., & Adebayo, T. (2020). Problems affecting the accessibility of physically-challenged individuals to intermediate public transport services in Oyo State, Nigeria. *Logistics, Supply Chain, Sustainability and Global Challenges*, 11(1), 114-120.
5. Casas, I. (2007). Social exclusion and the disabled: An accessibility approach. *The Professional Geographer*, 59(4), 463-477.
6. Smith, N., Beckhelling, J., Ivaldi, A., Kellard, K., Sandu, A., & Tarrant, C. (2006). Evidence base review on mobility: choices and barriers for different social groups. *Department for Transport*.
7. Ajayi, J., Aworemi, R., Wojuade, C., & Adebayo, T. (2020). Problems affecting the accessibility of physically-challenged individuals to intermediate public transport services in Oyo State, Nigeria. *Logistics, Supply Chain, Sustainability and Global Challenges*, 11(1), 114-120.
8. Elwan, A. (1999). *Poverty and disability: A survey of the literature* (Vol. 9932, pp. 1-48). Washington, DC: Social Protection Advisory Service.

9. Shimazaki, T., & Rahman, M. (1996). Physical characteristics of paratransit in developing countries of Asia. *Journal of advanced transportation*, 30(2), 5-24.
10. Bascom, G. W. (2017). *Transportation related challenges for persons with disabilities*. Utah state university.
11. Ipingbemi, O. (2015). Mobility challenges and transport safety of people with disabilities (PWDs) in Ibadan, Nigeria.
12. Dev, M., & Biswas, A. (2022). Studying the institutional framework for the public transport system in Jaipur, India. *Smart and Sustainable Built Environment*, 11(1), 79-92.
13. Levinson, D. M., Wasfi, R., & El-Geneidy, A. M. (2006). Measuring the transportation needs of people with developmental disabilities. *Available at SSRN 1743631*.
14. Mackett, R. L., & Thoreau, R. (2015). Transport, social exclusion and health. *Journal of transport & health*, 2(4), 610-617.
15. Lucas, K., & Currie, G. (2012). Developing socially inclusive transportation policy: transferring the United Kingdom policy approach to the State of Victoria?. *Transportation*, 39, 151-173.
16. Carlisle, C., Mason, T., Watkins, C., & Whitehead, E. (Eds.). (2005). *Stigma and social exclusion in healthcare*. Routledge.
17. B. O. (2007). Towards sustainable public transport for disabled people in Nigerian cities. *Studies on Home and Community Science*, 1(2), 93-101.

Accelerating Healthcare Innovation with DevOps: Lessons from Successful Implementations

Mahipal Brahambhatt

Change Healthcare

Abstract:

As organisations strive to meet their strategic objectives, DevOps offers a compelling set of strategies and techniques which enable production and IT teams to collaborate more efficiently. This is becoming increasingly important as industries like software development move towards the continuous delivery model. The healthcare industry in particular has embraced DevOps practices here in the United States; transitioning away from isolated subunits in order to satisfy customer demands through joint efforts across all functions - allowing for better organisation, improved responsiveness, accelerated product releases, and an overall enhanced customer experience. Healthcare organisations are actively embracing DevOps to remain competitive in a rapidly-evolving digital medical practice. With its many advantages, such as meeting service and application goals, maintaining IT quality and effectiveness, improving healthcare IT practices, cost reduction for patients, and being adaptable - it's no surprise that the concept of DevOps has become so popular amongst global institutions. This paper will discuss what impact this newfound technology could have on traditional healthcare processes; providing insight into keywords such as continuous delivery (CD), continuous integration (CI), and continuous deployment (CR). Additionally, we'll also be exploring where entities can begin their journey toward success with minimal costs when implementing any new transformation project using DevOps methods.

I. INTRODUCTION

The healthcare industry is expanding at a fast pace, with both private and public institutions relying heavily on technological advancements. In this service industry, traditional approaches hinder effectiveness, and hence the adoption of information technology (IT) is essential. DevOps is a merger of agile architecture and organizational excellence, and it aims to simplify operations and production methods to deliver coordinated treatment, and increase efficiencies

and agility throughout the lifecycle. Healthcare-related DevOps offers immense potential for organizational quality improvement. Through the integrated practice of software production and Agile development, organizations can leverage powerful digital transformation solutions that maximize efficiency while boosting performance standards.

Healthcare institutions face a unique set of challenges to remain competitive in the market and comply with government regulations. DevOps-centered architectures and approaches can facilitate successful expansion while providing greater operational visibility, improved security, scalability immaculately tailored for each customer's needs as well as shorter response times - ultimately allowing healthcare organizations to gain an upper hand against their competition. Healthcare organizations are increasingly leveraging cloud applications to unlock the power of their data. By doing so, they create more ways for patients and staff alike to access up-to-date health information quickly and securely—bringing a wealth of knowledge that was previously out reach closer than ever before.

Healthcare organizations have embraced technological applications to transition from paper-heavy systems, while simultaneously strengthening their network's connection with administrative structures. Centralized data plays a key role in the healthcare industry and DevOps has emerged as an ideal framework for easy access and verification of crucial information. By combining rapid automation and data-driven insights, DevOps is revolutionizing patient care in the United States. This paper examines how adopting a DevOps approach can create competitive advantages while simultaneously improving health outcomes.

II. LITERATURE REVIEW:

A. Importance of DevOps in Healthcare Industry

Healthcare institutions are making concerted efforts to accelerate the implementation of their big data projects. These initiatives involve vast amounts of data from various sources such as medical equipment, Electronic Health Records (EHRs), insurance premiums, lab tests, and wearable devices. The lack of preparedness and attention to detail in such projects can lead to ineffective or even worsened medical treatment outcomes. Traditional development approaches that rely on the Software Development Life Cycle (SDLC) can increase costs and decrease user friendliness. Therefore, DevOps has become a crucial solution for healthcare

organizations to enhance and expedite the implementation of big data tools [4]. An anonymous source in the healthcare sector recently engaged IBM to implement a DevOps initiative. This led to improved project enforcement, as well as product development and advancement, by making the business structure more precise and transparent. The DevOps approach in healthcare is becoming increasingly significant, enabling teams to work faster and more cost-effectively.

B. A step-by-step guide on how to implement DevOps in healthcare

Step 1 of DevOps implementation involves shrewd planning to reach successful outcomes. Organizations must evaluate their development and operational activities with the aim of modifying production procedures, while taking into account potential financial costs and necessary human resources for optimal performance..

Step 2 of healthcare application development requires a code repository with version control for effective collaboration between developers. This system allows updated versions to be tracked, enabling the creation and testing of applications both offline and online - ensuring no disruption in quality or productivity.

Step 3 is continuous integration, which can improve the efficiency of code review. This involves expanding test coverage before implementing changes, using resources such as Continuous Integration (CI) and Process Automation (PA). Using CI resources can speed up the perfect integration with healthcare setup, which is critical to producing quality applications.

Step 4 is the cornerstone of automation, which significantly boosts efficiency when it comes to IT paving the way for more effective data retrieval. To ensure secure code recovery and periodic testing, an automated build must be initiated from registry compilation into a machine-readable binary artifact.

Step 5 of the process allows for streamlined releases with Continuous Deployment, ensuring that updates are delivered in an efficient and timely manner.. This approach automates and periodically brings modifications to the program, making the solution available to those who do not yet have the newest versions. This is particularly useful for customized healthcare solutions.

Step 6 is constant feedback and tracking, which is the final phase of DevOps implementation. Continuous management should be implemented in the development of healthcare software applications to ensure that their functionality and efficiency remain consistent.. Regularly obtaining input on the results gathered from self-monitoring techniques can help identify and address minor problems, as well as keep abreast of major trends over time. It's essential to achieve sustainability in this phase.

C. Optimal methods for incorporating DevOps into the healthcare sector

In order to successfully implement DevOps in healthcare, it's important to have strong leadership and collaboration skills, as well as strategies for shared resources and automation for development and quality assurance. To ensure successful cooperation and execution within the DevOps team, it is vital to have a thorough comprehension of development, testing and implementation processes. The use of reliable communication platforms will guarantee smooth collaboration between group members. A team-oriented approach to coordination, production, integration, monitoring and operations is essential for an effective automation effort. To ensure a smooth workflow within the development phase it's necessary to have clear protocols in place as well as adjustable tooling which can accommodate DevOps processes. For maximum impact across production and operations we recommend optimizing requests with faster learning times that are capable of handling any modifications during output changes. By leveraging fixed-reimbursement plans and Kanban methodology in healthcare, teams can experience faster development cycles with complete visibility throughout. The advanced analytics from the latter allow for a thorough comparison of projected needs to existing resources - ensuring accurate estimates and successful product delivery.

To maximize understanding and accessibility with respect to the project's manual and automated systems, developers should leverage a variety of resources. Defining DevOps processes is an important part of selecting effective tools, however these two objectives are not necessarily linked together inextricably. With just minimal difficulty or modification required from human operators for basic tasks such as self-learning or versatile functions, test automation can be enabled without much overhead on their part - leaving them free to explore even more capabilities once they have mastered results provisioning [7].

D. Test automation

Test automation provides development teams with a dynamic approach to software quality and performance analysis. By using various algorithms, developers can make the necessary adjustments for optimal results. It's essential to create a specific acceptance test suite for each deployment method, with a crucial step being to define approval criteria for successful deployment. High-level software tests require a precise definition of the degree and parameters to accurately evaluate performance. Careful planning ensures that your product performs to its full potential in all scenarios. Creating evolutionary provisions can simplify potential regulatory compliance requirements.

Ongoing feedback and communication between the team members are crucial to identify loopholes, flaws, or errors in the workflow and measure performance effectively. Automation can create a collaborative environment between producers and consumers, leading to the elimination of costly inefficiencies. By implementing systems that recognize mistakes, notify involved parties and provide solutions - while alerting them in real-time - efficiency will be enhanced with measurable results. The successful implementation of changes described in the final report is also critical. By creating a DevOps Community of Practice (CoP), organizations can ensure the uniform execution and implementation of DevOps operations, boost employee engagement, facilitate regular contributions and Q&A sessions, introduce team members to the project, familiarize them with its intricacies, and greenlight its commencement

E. Providing DevOps as a service within the healthcare industry

Healthcare organizations are increasingly turning to DevOps as a Service to facilitate collaboration and streamline their IT infrastructure. With Salesforce providing a comprehensive application development environment, the ability of the existing infrastructure to handle the data generated by the solution is a key consideration. Conversion becomes easier and faster with web-technologies or through hardware integration. DevOps systems provide the necessary deployment, performance analysis, configuration management for an efficient product evolution cycle.

Investing in DevOps in healthcare yields high returns with no advanced training required for workers. Our solution embraces scalability and expandability to ensure users have access to the exact data they need. By collecting information from medical facilities and pharmaceutical

firms, we create a platform connecting multiple parties in an environment that encourages collaboration through efficient exchange of insights. The adaptability of web-based DevOps solutions facilitates the adoption of DevSecOps-compliant infrastructure by stakeholders. The software is user-friendly, featuring straightforward deployment configurations that streamline server setup and management.

DevOps resources are effective in reducing the time required for operations. Software and operations developers have built DevOps to provide a smart cloud approach that addresses many security issues. Healthcare organizations can effectively meet consumer needs in innovative and more productive ways due to the unique and effective ways of DevOps solutions.

F. The advantages of incorporating DevOps practices in the healthcare industry:

The primary advantage of utilizing DevOps in the healthcare sector is its adaptability for pharmaceutical and biotechnology businesses. It accelerates the feedback process, reducing the feedback time for quality support and improving customer satisfaction. The DevOps approach has revolutionized the way companies' technology departments collaborate. By weaving together philosophies, methods and tools to reach increased app distribution with faster time-to-market, easier testing and tighter security, all critical aspects for customer satisfaction - its benefits are evident across industries. For healthcare organizations facing ever stricter regulations on data collection and storage requirements however, utilizing this cutting edge methodology can be especially advantageous.

1. Enhances Patient Engagement and Satisfaction:

Utilizing Continuous Delivery and continuous integration, hospitals can now deploy various solutions with ease to ensure smooth patient check-ins that are free from obstacles. Implementing the right measures for current inpatient issues makes hospital throughput more manageable - ensuring a stress-free experience even when patients may be feeling ill or distressed. Another improvement that healthcare organizations can introduce on the mobile patient interface is a program that informs patients when test reports are ready or an automated service that monitors pending appointments and

immediately offers a solution in case of cancellations. When healthcare institutions can incorporate more technologies that improve organizational performance while preserving patient welfare, the quality of treatment, retention, and satisfaction levels will improve.

2. Improves a company's competitive edge

When launching new healthcare products, time is of the essence, especially when strict regulations and protocols are in place to ensure patient safety. While investing in technology to enhance a facility's value is important, it is even more critical to invest in technology that improves patient care and performance, and if there is sufficient financial commitment to do so. DevOps helps to expand and automate infrastructure maintenance and monitoring, reducing production time and allowing for quicker problem fixing and release. Microservices can be used to quickly and effectively provide healthcare systems that can scale in both the short and long term. By using more software and technology in their digital initiatives, healthcare organizations can reduce their time to market, which is an important benefit to gain a competitive edge over rivals. Adopting a DevOps model allows company developers to offer a better patient experience with innovative and updated technologies, enabling them to release new and better innovations faster than competitors.

3. Improving efficiency of infrastructure

Developing innovative healthcare services and applications is a crucial necessity in the industry. It's essential to plan the budget wisely when dealing with ambitious projects that take longer to complete. DevOps can help healthcare providers make better use of their resources, especially those that are scarce. For instance, event-driven serverless architecture allows using only the necessary resources for the service or application being developed. Capital utility consumption should be taken into account when building applications and programs. Therefore, using a HIPAA-compliant healthcare architecture, DevOps and application delivery tools can be used more efficiently.

4. DevOps for better patient engagement:

The effectiveness of the healthcare system relies heavily on ensuring patient engagement and satisfaction. To cater to the various patient requirements, a

microservices architecture can be leveraged with the help of continuous delivery (CD) and continuous integration (CI). For example, a new security check-in system can be implemented in case of emergencies and patient registration can be managed more efficiently. Furthermore, new features can be added to patient portals for quick access to test results, with patients being notified when the results are available [12]. These DevOps tools offer several advantages, such as enabling companies to check staff availability and keeping patients informed about any schedule changes. The incorporation of such tools can also enhance the quality of care provided to patients, leading to improved patient engagement. The deployment of new procedures to cater to patient needs can also help improve operational quality without impacting consumer security.

5. Helps with Meeting Regulations and Ensuring Information Security:

DevOps principles help organizations stay agile, up-to-date and compliant. By using a shared infrastructure code between development, deployment, update and operations teams the process of updating systems is streamlined to keep pace with changing regulations. Automated policies added at the code level can enforce compliance checks on an enterprise scale while enabling detection of potential threats quickly. DevOps is revolutionizing the way industries, like healthcare and finance are doing business by providing efficient processes, abundant resources and unprecedented capabilities. From blockchain friendly logistics to secure patient information encryption in financial institutions; this technology has potential to transform our current frameworks across sectors. By employing agile development practices within a DevOps framework - users can curtail risk while feeling confident their data remains safe behind sophisticated protection models.

6. Supports a Data Science Initiative:

Data is constantly being generated and it's possible to process all of it, but most of the results are not useful. Developers can create their own data resources and keeping growth phase data makes it more accessible [17]. In the healthcare industry, DevOps can help create new solutions and allow existing applications to benefit from cloud solutions. AI-powered patient assistance and improved health portals are the wave of

the future, offering quality outcomes that augment a distributed healthcare system. DevOps is our chance to be part of this innovative journey towards better care.

III. IMPORTANCE OF DEVOPS IN THE U.S HEALTHCARE SYSTEM

The healthcare system in the United States has embraced the use of DevOps practices to improve the quality of services offered to patients. The integration of DevOps in telehealth and telemedicine services has made it easier for patients to access healthcare services digitally. According to the Accenture Digital Health Consumer report of 2019, more than 50% of patients express a preference for healthcare service providers who offer digital capabilities. Patients have also shown an increased inclination towards choosing healthcare providers that offer mobile or telemonitoring services.

Through innovative DevOps strategies, Kaiser has transformed its infrastructure processes to unlock the power of telehealth and interactive resources for their clients. This is no small feat since large data management can be a significant challenge in healthcare- with Electronic Health Records (EHRs), medical records, and insurance premiums requiring streamlined solutions. By leveraging these modernized practices, Kaiser continues to provide high quality care that encourages access to best patient outcomes.

DevOps practices have enabled healthcare facilities to make services easily accessible to patients through digital platforms, including videoconferencing systems that allow doctors to interact with patients remotely. DevOps also ensures the security of patient data by complying with regulations such as HIPPA and PCI (Payment Card Industry Security). Furthermore, DevOps practices help healthcare providers to streamline processes, reduce errors, and improve the quality of services offered to patients.

IV. CONCLUSION

As the healthcare sector has evolved, DevOps solutions have become increasingly valuable in helping IT companies meet growing customer demand and preferences. To compete with market leaders, firms now need to deliver advanced IT solutions swiftly and effectively; this

makes having access to cloud computing capabilities even more important for organizations that operate within a rigid workflow structure. The speed of these operations is affected by their ability to use innovative technology successfully - making it an essential factor for staying ahead of competitors in today's markets. So, to succeed in the healthcare sector, an organization must adopt a new market paradigm that leverages innovative ideas and facilitates collaborative efforts between teams. Automation can play key roles here; however, it is equally important to gain insight into existing internal systems for effective assessment of emerging solutions' impact on patients and company's long-term goals. Many successful healthcare organizations have implemented DevOps strategies which effectively capture any advantages from this approach.

References:

1. Ravichandran, A., Taylor, K., & Waterhouse, P. (2016). *Devops for digital leaders: Reignite business with a modern devops-enabled software factory* (p. 173). Springer Nature.
2. Balalaie, A., Heydarnoori, A., & Jamshidi, P. (2016). Microservices architecture enables devops: Migration to a cloud-native architecture. *Ieee Software*, 33(3), 42-52.
3. Swartout, P. (2014). *Continuous delivery and DevOps—A quickstart guide*. Packt Publishing Ltd.
4. Yasar, H., & Kontostathis, K. (2016, November). Secure DevOps Process and Implementation. In *2016 IEEE Cybersecurity Development (SecDev)* (pp. 166-166). IEEE.
5. Madni, Azad M. "Integrating humans with software and systems: Technical challenges and a research agenda." *Systems Engineering* 13, no. 3 (2010): 232-245.
6. Ståhl, Daniel, and Jan Bosch. "Modeling continuous integration practice differences in industry software development." *Journal of Systems and Software* 87 (2014): 48-59.
7. Forsgren, N., & Humble, J. (2016). DevOps: Profiles in ITSM performance and contributing factors. *Forsgren, N., J. Humble (2016). "DevOps: Profiles in ITSM Performance and Contributing Factors." In the Proceedings of the Western Decision Sciences Institute (WDSI).*
8. Aiello, Bob, and Leslie Sachs. *Agile application lifecycle management: Using DevOps to drive process improvement*. Addison-Wesley Professional, 2016.

9. Gruver, G., & Mouser, T. (2015). *Leading the transformation: Applying agile and DevOps principles at scale*. IT Revolution.
10. Yasar, Hasan, and Kiriakos Kontostathis. "Where to integrate security practices on DevOps platform." *International Journal of Secure Software Engineering (IJSSE)* 7, no. 4 (2016): 39-50.
11. Geerling, Jeff. *Ansible for DevOps: Server and configuration management for humans*. Leanpub, 2015.
12. Hung, Shin-Yuan, Charlie Chen, and Kuan-Hsiuang Wang. "Critical success factors for the implementation of integrated healthcare information systems projects: An organizational fit perspective." *Communications of the Association for Information Systems* 34, no. 1 (2014): 39.
13. Yarlagadda, R. T. (2018). Understanding DevOps & bridging the gap from continuous integration to continuous delivery. *Understanding DevOps & Bridging the Gap from Continuous Integration to Continuous Delivery'*, *International Journal of Emerging Technologies and Innovative Research (www.jetir.org)*, ISSN, 2349-5162.
14. Hüttermann, M. (2012). Beginning devops for developers. In *DevOps for Developers* (pp. 3-13). Berkeley, CA: Apress.
15. Acharyya, A. (2013). Signal processing architecture implementation methodologies for next-generation remote healthcare systems. In *Systems Design for Remote Healthcare* (pp. 93-128). New York, NY: Springer New York.
16. Christensen, H. B. (2016, July). Teaching DevOps and cloud computing using a cognitive apprenticeship and story-telling approach. In *Proceedings of the 2016 ACM conference on innovation and technology in computer science education* (pp. 174-179).

Robotic Process Automation Adoption in Insurance and Banking: A Comparative Study of Success Factors

Bhanu Prakash

Chubb Insurance

Abstract:

In the world of technology, robotic process automation (RPA) has emerged as one of the most prominent trends of recent years. To delve deeper into this phenomenon and its impact on businesses, we conducted a study across five organizations in the banking, financial services, and insurance sectors. Our findings shed light on the practical applications of this innovative solution for firms looking to invest in new technologies. Stay ahead of the game by discovering how RPA adoption is transforming industries. Our goal was to answer the question: how does RPA technology hype affect organizations, and what impact does it have on their adoption behavior and decision-making processes? Our findings suggest that senior management plays a critical role in driving adoption and legitimization, beyond what existing theories have identified as sponsorship. Our study uncovers the influence of hype on an organization's performance, providing key insights to industry leaders looking into incorporating hyped technologies such as RPA. We discovered that interdisciplinary teams exploring potential use cases are integral in identifying ongoing operational issues and fostering organizational learning.

Keywords: RPA hype, adoption, automation, organizational change, performativity.

Introduction:

Revolutionize your organization's work with Robotic Process Automation (RPA) - the innovative technology that uses digital software to automate repetitive tasks. This frees up time for your employees to focus on more meaningful tasks, boosting overall productivity. Each software instance is called a bot - mimicking human actions like mouse clicks and file openings to interact with applications. In 2018, the enterprise software market experienced massive growth thanks to RPA, and it's predicted to reach an impressive \$2.9 billion by 2025. Join the

RPA revolution and streamline your organization's workflow. Leading RPA companies such as UiPath and Automation Anywhere have been attracting significant investments and valuations due to this growth. Despite its quickly growing relevance, research into robotic process automation is still largely restricted to individual case studies examining the rollout of RPA technologies and associated business impacts. There is also limited research on how hype and expectations impact RPA adoption decision-making processes within organizations.

In this research, we delve into how the hype around RPA technology impacts organizations and their choices regarding adoption. Conducted through an inductive multi-case study method, we aim to uncover the adoptee's perspective on hype and the complex decision-making process of technology adoption. Our article offers a comprehensive overview of existing literature on expectations and hype concerning RPA implementation, followed by a thorough explanation of our methodology, empirical evidence analysis, and discussion of the findings. As a rapidly growing industry, this study has significant implications for practitioners navigating this landscape.

2. Literature review:

2.1 Hype and Expectations

Hype has become an integral part of marketing and public relations, with organizations attempting to generate inflated expectations in order to garner attention. These enthusiastic responses may be fruitful initially, but can create unrealistic promises that the technology is unable to match. The subsequent disappointment phase often leads a technological wave through space and time as various actor groups experience varying levels of hype at any given moment; this phenomenon being known as the "hype cycle". However, it isn't always doom-and-gloom for every innovation - performativity still plays a role by helping mobilize resources within organizations or communities which can shape future visions even though initial excitement diminishes over time. Technology investments then reach higher stakes due to these commitments; if successfully implemented they might just "become too big to fail".

During a hype wave, the governing and coordination of expectations surrounding an innovation can be affected by various actor groups. Through journals, conferences, articles and market reports their influence on forming new markets can come to fruition; with industry analysts such as Gartner having particular sway in this regard. At an organizational level assistance

from senior management is paramount for successful technology implementation – not only providing legitimacy but also partial funding when necessary - particularly true when considering RPA adoption where c-suite support has been found to drive success [3], [33]. This study will explore how hype permeates organizations through its associated key actors while examining the behavior within adopting businesses that it generates during acceptance decisions without necessarily judging ultimate RPA success or failure.

2.2 RPA Adoption:

Technology adoption, such as cloud computing and enterprise collaboration systems, continues to be a highly studied topic amongst scholars who emphasize its associated benefits. Research on Robotic Process Automation (RPA) follows the same trend in considerations of appropriate use cases, implementation methods and derived advantages - increased productivity & efficiency through rapid scale-up capabilities; reduced reliance on IT workforce for accuracy purposes; extended system integrations previously not achievable; plus unlocking greater potential by enabling people to focus their efforts elsewhere.

Recent studies have indicated that organizations tend to adopt RPA in order to reap the benefits of cost savings, increased operational efficiency and process renewal. However, there has been limited research around understanding why these higher-level objectives become connected with RPA or how alternative solutions are assessed for success.

Organizations should explore how incorporating RPA into their operations could help them meet goals, rise to challenges and optimize process management. According to Davenport & Ronanki research, this requires taking a holistic perspective of the technology - combining it with additional AI solutions for maximum benefit. Ignoring broader applications may mean missing out on far more value than automation alone can provide.

Organizations can maximize the benefits of RPA by transitioning away from a singular focus on technology and its features to an understanding that it should be embedded into various business processes as part of their automation or optimization strategies. Forming specialized teams, like robotics labs, allows for creative problem-solving which helps make this transition smoother.

The state of RPA research has largely explored the strategic planning and oversight necessary to bring its implantation into fruition. However, what remains a mystery is just how organizations approach implementing the technology - from recognition of its potential all the way through the POC process leading up to adoption. Investigating this can help shed light on which internal or external stakeholders are instrumental in bringing about successful implementation outcomes for organizations worldwide.

Methodology

We used a multi-case inductive study [41] to conduct our research. Our investigation led to the formation of a hypothesis regarding how hype affects an organization's adoption process. By studying multiple cases, we sought to gain more reliable insights into our theory and its outcomes [41], [42].

3.1 Sampling of case-study organizations:

The sample has been collected from five different organizations. Table 1 provides a brief overview.

Organization’s Case Study			
Case Ref.	Brief	Employee’s Count	Source
Large Insurance	Global insurance company in the USA.	6,000	IT strategist,operational excellence managers & RPA architects.
Insurance Server-2	USA insurance operator	1,700	IT & Operation Director

Larger Bank	Large Global Bank.	190,000+	Operation & automation experts.
Medium Bank	Medium size Global Bank.	84000	Product manager & It strategist.
Insurance	Server- Global Insurance Giants	1200	Operational Excellence & RPA modeler

To ensure that our theory is both broadly applicable and able to account for unrelated variables, we carefully selected our cases from the BFSI sector. We believe that BFSI represents a diverse community of actors who may be experiencing different stages of the RPA hype wave compared to other sectors. It's important to note that we are not trying to present a comprehensive analysis of the sector. Rather, our sampling strategy was designed to capture the varying levels of RPA adoption across different industries and where they stand in the hype wave.

3.2 Data Collection

We gathered data through interviews, which provided us with detailed and comprehensive information about the events, processes, and key individuals involved in RPA adoption. In order to limit bias, we utilized well-informed interviewees as our exclusive data source - a practice that yielded the most accurate results. With the exception of LargeBank, we conducted interviews with various sources to validate the information and obtain a more comprehensive comprehension of the situational aspects and their correlations. Our sources included employees from different departments who were directly involved in the implementation of RPA. We conducted an introductory meeting, followed by a 60-minute semi-structured interview via video conference, which was recorded and transcribed. We also used email and

phone to clarify statements or collect missing pieces of information. Figure 1 below illustrates the data collection process.

We conducted informant interviews with individuals who had extensive experience with RPA adoption and could provide detailed explanations of events and history. Our team conducted interviews to gain insight into the formative stages of this project. We explored how excitement for an idea was embraced by those involved, and its subsequent journey from planning to action. Additionally, we analyzed internal expectations set forth during development as well as their success in realization once execution began. We used generative questions to elicit detailed responses and also used tour, timeline, and experience questions. For instance, we asked informants to walk us through how RPA first came about, including who the key people were. We interjected as needed to ask more specific questions. We also used some questions to explore how RPA outcomes compared to earlier expectations. We occasionally probed informants about the motives of others, but tried to avoid speculation.

3.3 Data Analysis:

We embarked on a thorough data analysis journey, mapping out the timelines for each exhibit case. After carefully categorizing reflective transcript excerpts with targeted descriptors, our code list grew and new motifs started to surface - one such being ‘the beginning’ that encapsulated all details pertaining to how the robotics automation rollout was first initiated alongside initial actions taken and decisions made.

Taking a multilayered approach, we conducted an initial coding of each transcript before breaking the data down further. We identified themes for deeper analysis through primary cycle codes and used memos to document our findings as well as generate ideas and questions around finer-grained topics. To uncover any cross-case patterns, we examined similarities and differences in every case which ultimately helped us draw more meaningful insights from the overall dataset.

Throughout our research process, we took great care to ensure each case acted as an accurate replication of previous findings. If any divergent sources arose from a particular case, careful probing, and revisiting was employed in order to gain insights that could inform or challenge

existing theories. We reviewed the literature available on the topic and proposed possible explanations for why certain themes emerged between cases; these were documented throughout sections of our paper. The results generated by this methodical approach are visualized succinctly in Figure 2 - providing readers with a comprehensive understanding of how data analysis occurred during this investigation.

4. Empirical Findings:

4.1 The Function of Senior Management

All except one of the cases we studied started using RPA between 2016-2018, a time when RPA gained popularity and interest grew significantly, as shown in Figure 3. In all cases, except MedBank, it was a senior manager who became interested in RPA and played a significant role in implementing it. For instance, in LargeIns, the CEO directed the IT team to create a business case for RPA, influenced by external consultancy firms and vendors. The promise was to reduce costs and improve operational efficiency by automating repetitive tasks. Similarly, in InsServ_1, the board pushed the IT team to explore RPA, and in LargeBank, a senior general manager launched the initiative. In InsServ_2, the initiative began earlier in 2014, thanks to a senior executive who had experience with robotics. This started a conversation that led to the adoption of RPA.

In MedBank, the situation differed slightly as both an IT analyst and their manager discovered RPA around the same time and proposed it for a hackathon. The COO played a critical role in promoting the idea, which became evident after he left the company. When he departed, all the stakeholders disappeared, leaving the Automation Lead unsure of what was happening and unwilling to push forward. Table 2 summarises the sources of excitement at the point of adoption, along with senior management's expectations. With the exception of InsServ_2, who adopted RPA earlier, in all cases, several colleagues were beginning to explore and discuss RPA before adoption.

4.2 solution looking for problem

The implementation of RPA involved a similar process for all the cases studied. The first step was to identify the potential processes and sub-processes that could be automated. LargeIns, InsServ_1, and MedBank brought in external consultancies to identify these opportunities. LargeBank, on the other hand, encouraged all areas of the bank to identify potential processes

to automate. After careful consideration, board approval was granted to take on RPA implementation across various processes. To ensure successful execution, experts were recruited and dedicated efforts made towards outreach activities such as workshops, communication initiatives and data analysis.

4.3 Internal promotion of RPA

The automation teams at LargeBank, LargeIns, and InsServ_2 have made major strides in their journey toward robotic process automatization. They invested significant time into building a case for RPA internally, sharing successes as well as launching initiatives to both identify opportunities and promote the technology's use throughout their organizations. To further drive exploration of this valuable capability for cost efficiency improvements - from creating SharePoint sites, PR campaigns or appointing dedicated personnel- these companies are positioning themselves ahead of the curve by embracing robotics with open arms.

4.4 Guidelines for Choosing Processes

To identify ideal processes for RPA implementation, the organizations featured in our case study sought input from both IT and Operations perspectives. Some employed a hybrid approach to maximize benefit on their Robotic Process Automation journey.

The teams at LargeIns and InsServ_2 worked diligently to emphasize operational excellence, leveraging lean techniques for their RPA initiatives. They believed that process improvement should be combined with RPA, or that process improvement should be considered as an alternative to implementing RPA. LargeIns, for example, developed a decision tree tool to evaluate the appropriateness of processes for RPA, estimate costs, and potential savings. The tool also helps determine whether the process requires improvement. A senior IT Strategist at LargeIns explains the decision tree's output: "You can get to: Indeed, while automation can be the ultimate goal or a means to enhance it, it merely constitutes Operational Excellence."

4.5 Uncovering concealed issues and organizational learning

Many long-standing problems were uncovered through the use of RPA in the case-firms, which came as a surprise to some. In LargeIns, InsServ_1 and MedBank, the analysis work led to the

discovery of issues that had gone unnoticed for years. After making an in-depth analysis of the processes at LargeIns, Automation Lead discovered that employees on the frontline had been facing significant challenges. Unexpected problems were exposed through questions posed around the business and it created a stir within their organization. In MedBank, RPA analysis work uncovered issues with poor data entry and updates being made to systems that were never accessed.

During the RPA program in LargeBank, there was significant learning activity around process complexity and variation. Assumptions made by the team about processes were wrong as they had not appreciated the level of variation between regions, products, and system landscapes. As a consequence, the savings were excessively overestimated.

InsServ_2 found new opportunities to optimize processes with RPA. While the results varied, often in terms of hours saved versus job cuts, many organizations were able to reduce workload and free up resources for more productive activities through automation. Such victories show that technology can play a powerful role in improving organizational efficiency while keeping jobs secure.

5. Discussion:

Our study delves into the adoption of RPA technology among organizations and examines the decision-making process involved. Our findings reveal three crucial factors that shape this process: the role of senior management, the methods used to source RPA use cases, and the impact of RPA implementation on the organization. We discuss these factors in detail below:

5.1: Senior management plays a crucial role in driving the adoption of RPA technology within an organization. The study found that the hype surrounding RPA places pressure on senior management to adopt the technology, as they do not want to be left behind. Most organizations began exploring RPA between 2016-2018, which coincides with a period of increasing hype and publicity surrounding the technology. The study also found that external pressure from the market, coupled with a perception that "everyone else is doing it," encourages senior managers to act as sponsors and advocates for RPA adoption. This legitimization helps overcome internal barriers, such as resource scarcity, lack of budget and governance processes, that might otherwise inhibit the adoption of RPA.

While senior managers are important in instigating RPA adoption, the study found that in some cases they focused excessively on RPA to the detriment of other alternatives. This one-sided focus on RPA can lead to a "hunt for use cases" within the organization and an over-reliance on the technology as the only viable option. This can ultimately limit the organization's ability to explore other complementary or alternative technologies.

5.2 The search for suitable applications of RPA technology created pressure on organizations to identify use cases. To do this, organizations established structures and began searching for processes that were appropriate for RPA. However, in a context of technological hype, organizations are more likely to adopt a technology-push approach where decisions on technology adoption are not necessarily driven by a need to solve existing problems. Instead, adoption is driven by the capabilities of the technology and efforts of organizational actors to locate problems which can be solved by it. Although senior management was involved in the adoption of RPA, specialist RPA automation teams were still created to hunt for use cases. These teams looked at operational processes to identify suitable use cases, but there was a disconnect between these teams and the experts in Operations. The RPA experts filtered out some of the cases that were suggested by Operations as unsuitable. This disconnect between teams caused tension, and it did not allow bottom-up initiatives to develop. However, it did reveal long-standing operational issues, and it generated organizational learning between previously disconnected experts.

5.3 Organizations struggling to adopt Robotic Process Automation (RPA) faced gaps in understanding between automation teams and Operations. However, this dialogue ultimately revealed systemic problems that were previously unseen. To ensure successful RPA adoption moving forward, organizations should extend their exploration of digital technologies beyond just IT departments - fostering a closer relationship with use cases for greater organizational learning opportunities. Furthermore, it's essential to differentiate heavyweight IT tasks from lightweight ones; the former handled by core systems maintained by the IT function while latter include activities such as RPA which rely more on expert knowledge than legacy infrastructure maintenance alone to generate business value through innovation.

6. Conclusion:

The paper outlines the journey of BFSI organizations as they adopt hyped technologies, such as RPA. It is shown that senior management play a pivotal role in driving adoption from initial

stages through to implementation by legitimizing digitalization visions and allocating resources for development. Additionally, external consultants are employed to identify suitable use cases and create necessary organizational structures; yet tensions can arise between different expert teams during selection criteria definition processes. Ultimately though, these projects often reveal underlying problems within an organization whilst fostering collaborations across departments - both major benefits towards overall business growth.

This paper provides insight on how to practically adopt a hyped technology such as Robotic Process Automation. It argues that adoption requires senior management's approval, mobilization of organizational resources and interdisciplinary involvement across multiple levels in order to formulate effective use cases. While this may generate tensions between different knowledge regimes, for successful implementation learning must be prioritized. By analyzing the performativity of hype from both theoretical and practical perspectives this research offers valuable guidance for organizations looking to unlock the potential benefits of RPA technologies.

References:

1. Chugh, R., Macht, S., & Hossain, R. (2022). Robotic Process Automation: a review of organizational grey literature. *International Journal of Information Systems and Project Management*, 10(1), 5-26.
2. Van der Aalst, W. M. (2021). Hybrid Intelligence: to automate or not to automate, that is the question. *International Journal of Information Systems and Project Management*, 9(2), 5-20.
3. Willcocks, L. P., Lacity, M., & Craig, A. (2015). The IT function and robotic process automation.
4. Devarajan, Y. (2018). A study of robotic process automation use cases today for tomorrow's business. *International Journal of Computer Techniques*, 5(6), 12-18.
5. Harrast, S. A. (2020). Robotic process automation in accounting systems. *Journal of Corporate Accounting & Finance*, 31(4), 209-213.
6. Kaniadakis, A., & Linturn, L. (2021). Organisational adoption of a hyped technology: the case of robotic process automation. In *ECIS*.

7. Stople, A., Steinsund, H., Iden, J., & Bygstad, B. (2017). Lightweight IT and the IT function: experiences from robotic process automation in a Norwegian bank. *Bibsys Open Journal Systems*, 25(1), 1-11.
8. Penttinen, E., Kasslin, H., & Asatiani, A. (2018, June). How to choose between robotic process automation and back-end system automation?. In *European Conference on Information Systems 2018*.
9. Romao, M., Costa, J., & Costa, C. J. (2019, June). Robotic process automation: A case study in the banking industry. In *2019 14th Iberian Conference on information systems and technologies (CISTI)* (pp. 1-6). IEEE.
10. Hallikainen, P., Bekkhus, R., & Pan, S. L. (2018). How OpusCapita Used Internal RPA Capabilities to Offer Services to Clients. *MIS Quarterly Executive*, 17(1).
11. Osmundsen, K., Iden, J., & Bygstad, B. (2019). Organizing robotic process automation: balancing loose and tight coupling.
12. Asatiani, A., Kämäräinen, T., & Penttinen, E. (2019). Unexpected problems associated with the federated IT governance structure in robotic process automation (RPA) deployment.
13. Kirchmer, M. (2017). Robotic process automation-pragmatic solution or dangerous illusion. *BTOES Insights*, June, 17.
14. Devarajan, Y. (2018). A study of robotic process automation use cases today for tomorrow's business. *International Journal of Computer Techniques*, 5(6), 12-18.
15. Konrad, K., Van Lente, H., Groves, C., & Selin, C. (2016). 16 Performing and Governing the Future in Science and Technology. *The handbook of science and technology studies*, 465.
16. Konrad, K., & Palavicino, C. A. (2017). Evolving patterns of governance of, and by, expectations: The GrapheneHype wave. In *Embedding new technologies into society* (pp. 187-217). Jenny Stanford Publishing.
17. Geiger, S., & Gross, N. (2017). Does hype create irreversibilities? Affective circulation and market investments in digital health. *Marketing Theory*, 17(4), 435-454.
18. Van Lente, H., Spitters, C., & Peine, A. (2013). Comparing technological hype cycles: Towards a theory. *Technological Forecasting and Social Change*, 80(8), 1615-1628.
19. Pollock, N., & Williams, R. (2010). The business of expectations: How promissory organizations shape technology and innovation. *Social Studies of Science*, 40(4), 525-548.

20. Eisenhardt, K. M., Graebner, M. E., & Sonenshein, S. (2016). Grand challenges and inductive methods: Rigor without rigor mortis. *Academy of management journal*, 59(4), 1113-1123.
21. Swanson, E. B., & Ramiller, N. C. (1997). The organizing vision in information systems innovation. *Organization science*, 8(5), 458-474.
22. Beatty, R. C., Shim, J. P., & Jones, M. C. (2001). Factors influencing corporate web site adoption: a time-based assessment. *Information & management*, 38(6), 337-354.
23. Agarwal, R., Tanniru, M., & Wilemon, D. (1997). Assimilating information technology innovations: Strategies and moderating influences. *IEEE Transactions on Engineering Management*, 44(4), 347-358.
24. Low, C., Chen, Y., & Wu, M. (2011). Understanding the determinants of cloud computing adoption. *Industrial management & data systems*.
25. Eder, L. B., & Igarria, M. (2001). Determinants of intranet diffusion and infusion. *Omega*, 29(3), 233-242.
26. Flynn, D., & Du, Y. (2012). A case study of the legitimation process undertaken to gain support for an information system in a Chinese university. *European Journal of Information Systems*, 21, 212-228.
27. Hussain, Z., Taylor, A., & Flynn, D. (2004). A case study of the process of achieving legitimation in information systems development. *Journal of Information Science*, 30(5), 408-417.
28. Tidd, J., & Bessant, J. R. (2020). *Managing innovation: integrating technological, market and organizational change*. John Wiley & Sons.
29. Lacity, M. C., & Willcocks, L. P. (2016). A new approach to automating services. *MIT Sloan Management Review*, 58(1), 41-49.
30. Stieninger, M., Nedbal, D., Wetzlinger, W., & Wagner, G. (2018). Factors influencing the organizational adoption of cloud computing: a survey among cloud workers. *International Journal of Information Systems and Project Management*, 6(1), 5-23.
31. Greeven, C., & Williams, S. (2017). Enterprise collaboration systems: addressing adoption challenges and the shaping of sociotechnical systems. *International Journal of Information Systems and Project Management*, 5(1), 5-23.
32. Grung-Olsen, H. (2017). A strategic look at robotic process automation. *BP Trends*.
33. Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard business review*, 96(1), 108-116.

34. Gadre, A., Jessel, B., & Gulati, K. (2017). Rethinking robotics? Take a step back. *Journal of Financial Transformation*, 46, 34-45.
35. Hofmann, P., Samp, C., & Urbach, N. (2020). Robotic process automation. *Electronic Markets*, 30(1), 99-106.
36. Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, 14(4), 532-550.
37. Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of management journal*, 50(1), 25-32.
38. Gehman, J., Glaser, V. L., Eisenhardt, K. M., Gioia, D., Langley, A., & Corley, K. G. (2018). Finding theory–method fit: A comparison of three qualitative approaches to theory building. *Journal of Management Inquiry*, 27(3), 284-300.
39. Sullivan, M., Simpson, W., & Li, W. (2021). The Role of Robotic Process Automation (RPA) in Logistics. *The Digital Transformation of Logistics: Demystifying Impacts of the Fourth Industrial Revolution*, 61-78.
40. Tracy, S. J. (2019). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact*. John Wiley & Sons.