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Transforming Financial Management: An RPA Implementation Case Study at PT Telkom Indonesia

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Abstract

PT Telkom Indonesia (Tbk) has addressed the challenges of the digital era through its "5 Bold Moves" strategy, which aims to enhance business sustainability. In alignment with this initiative, the Finance and Risk Management Directorate has adopted Robotic Process Automation (RPA) technology to improve operational efficiency and strengthen its role as a Business Partner. This research analyzes the factors determining the success of RPA implementation in the Directorate. It also explores the challenges and risks involved in the digital transformation process. A qualitative approach is used, including interviews, observations, and data collection from stakeholders involved in RPA, such as strategic planners, managers, and users. The Critical Success Factor (CSF) model for RPA by Plattfaut et al. (2022) served as the theoretical framework that categorizing 32 factors into three areas: RPA in the organization, development RPA, and Operation RPA. The findings reveal that the successful implementation of RPA at PT Telkom Indonesia is contingent upon several factors: RPA in the organization (strategic support, management commitment, organization culture, training, and communication); development RPA (management support, policy compliance, expertise, change management, and documentation); and operations RPA (resource management, compliance, monitoring, and evaluation). This study contributes to the body of knowledge on RPA implementation by providing insights into the challenges and risks faced by large organizations undertaking digital transformation initiatives. The findings can serve as a valuable reference for organizations seeking to leverage RPA to improve operational efficiency and drive innovation.

Keywords: Strategy Implementation, Digital Transformation, Robotic Process Automation, Critical Success Factors, Finance Organization.

1. Introduction

The increasingly competitive business environment necessitates the development of creative competitive advantages that provide the best value to stakeholders in each sector. These advantages must be supported by business and operational strategies (Rothaermel, 2017). Financial organizational transformation is a strategic initiative aimed at aligning financial functions with overall corporate strategy. This transformation includes restructuring and implementing operational models, financial processes, capabilities, and replatforming financial

and accounting systems. Organizational change refers to independent entities that provide well defined services to multiple units within an organization (Ulbrich, 2009). One of the main drivers of corporate strategy development is technology (Wit & Meyer, 2010)

Technological disruption affects all business aspects, including financial organizations. Extreme automation is expected to create new operational models through robotic technology, known as Robotic Process Automation (RPA). RPA is an innovative technology that enables companies to significantly enhance operational productivity by replacing human labor with software robots, freeing human resources from repetitive tasks to more complex, value-added tasks (Kanakov & Prokhorov, 2020). Studies show that RPA can reduce Full Time Equivalent (FTE) costs by up to 50% (OSMAN, 2019). Infosys also supports this finding, indicating a 50% reduction in FTE and a 58% decrease in manual labor.

Telkom embarked on a large-scale transformation through the "5 Bold Moves" strategy in 2021, aiming to increase business value and sustainability in the disruptive digital era. To support this, the Directorate of Finance and Risk Management is undergoing financial organizational transformation. The objective is to create a world-class financial system that functions as a modern finance entity, adding value to help Telkom Group maintain profitability and sustainability. Based on the Four Faces of the CFO Framework, the FTE calculation results show that 11%, 11%, 18%, and 60% of the workforce are allocated to the roles of Catalyst, Strategist, Steward, and Operator, respectively. This indicates that 78% of the workforce is focused on Core Finance operational activities (Steward and Operator), most of which are still manual. To support the "5 Bold Moves" strategy, the target is to increase the role of finance as a Business Partner (Catalyst & Strategist) to 40%, up from the current 22%.

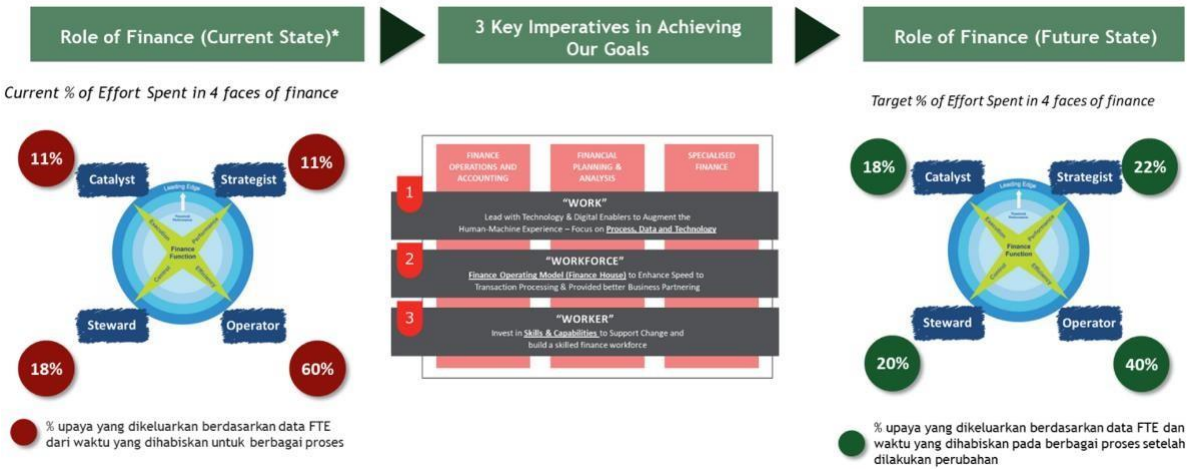

Fig. 1: Goals of Transformation of the Directorate of Finance and Risk Management

The adoption of RPA technology within the Directorate of Finance and Risk Management aims to streamline and enhance operational efficiency. Currently, there are 98 RPA use cases, with 77 already operational, 14 in development, and 7 in the ideation phase. Some of the operational use cases include Robocon Intercompany, Incoming Ticket Payment Management, and IDREV-GLACC for New Products. The table below compares use cases before and after RPA implementation

Table 1: RPA Implementation Use Case Example

No	Use Case	Transaction	Without RPA	With RPA
1	Robocon Intercompany	1000 letter per 3 month	5 days, and 3 Persons	3 hours, and 1 Person
2	Incoming Ticket Payment Management	3000 ticket/ month	52 ticket/hour	900 ticket/hour
3	IDREV-GLACC New Product	Sessional	105 minutes	14 minutes

Source: Researcher's Compilation (2024)

An assessment of total FTE across all financial functions reveals that most time and resources are still devoted to manual operational activities (Core Finance). This indicates challenges in the effectiveness and efficiency of the transformation process. The financial organizational transformation aims to create a world-class finance function that adds value and supports Telkom Group's profitability and sustainability. One strategic initiative in the digital transformation is the adoption of Robotic Process Automation (RPA), which automates manual processes to reduce work time and resource requirements. However, operational errors still occur during robot execution, suggesting barriers that may be related to RPA resource readiness, process knowledge, or tool and process governance.

Operational challenges in implementing RPA include developing work procedures that can be automated, translating those procedures into algorithms for robots, ensuring compliance with applicable rules and regulations, and promoting RPA use until it becomes as routine as using spreadsheet tools. Given these challenges, research on strategy implementation is needed to analyze the success factors in RPA adoption. Relevant research questions include: a) How is Robotic Process Automation (RPA) implemented within the Directorate of Finance and Risk Management at PT Telkom Indonesia? b) What challenges and risks are faced in adopting RPA within the Directorate of Finance and Risk Management at PT Telkom Indonesia? c) What research recommendations can be made to guide digital transformation in RPA adoption at the Directorate of Finance and Risk Management at PT Telkom Indonesia?

2. Literature Review

2.1 Strategic Management

Strategic management is the art and science of formulating, implementing, and evaluating cross-functional decisions to achieve organizational objectives. Strategic management consists of three main stages: 1) strategy formulation, 2) strategy implementation, and 3) strategy evaluation (David & David, 2017)

2.2 Digital Transformation

Digital transformation is a crucial strategic tool for companies to enhance competitiveness and performance by leveraging digital technology. According to (OECD, 2018), this transformation encompasses digitization, which is the conversion of analog data into digital format, and digitalization, which refers to the use of technology to change business activities. (Deloitte, 2018) adds that digital transformation improves organizational performance by involving new technologies, talent, and business models. Factors influencing the success of digital transformation include customer experience, collaborator competencies, business process efficiency, and business model innovation (Guzmán-Ortiz et al., 2020). Chiavenato (2014) and Angulo (2017) emphasize the importance of competencies and human resource training, while Stark (2020) highlights the role of organized business processes, and Vukanović & Vukanović (2016) stress the significance of integrating innovative business models.

2.3 Robotic Process Automation

Robotic Process Automation (RPA) was first introduced in 2012 by Patrick Geary of Blue Prism, although the European Patent Office (EPA) recognizes Cyrille Bataller and Adrien Jacquot as its inventors, defining RPA as technology that can automate repetitive manual tasks (OSMAN, 2019). RPA enables the use of "bots" to mimic human interaction with software applications. According to Sutherland, RPA replaces humans in processing applications such as ERP or claims systems, facilitating productivity improvements by reallocating employees to more complex tasks (OSMAN, 2019; Kanakov & Prokhorov, 2020). Additionally, RPA enhances accuracy, reduces human errors, and accelerates task completion, leading to higher customer satisfaction (Fersht & Slaby, 2012).

RPA also offers significant benefits in business processes, including enhanced information system security through robot interaction with user interfaces without the need for system modifications (Asatiani & Penttinen, 2016). The application of RPA is highly flexible and can be implemented across various industries, particularly in accounting and finance processes that require high levels of accuracy (Peccarelli, 2016). The implementation of RPA tends to be straightforward and quick compared to other IT projects, involving stages of assessing, developing, and sustaining automation processes (Geyer-Klingeberg et al., 2018). For successful implementation, the processes being automated must be rule-based and standardized, with minimal exceptions in business (Fersht & Slaby, 2012).

2.4 Change Management

Change management is a systematic approach to managing changes within an organization to adapt to a dynamic business environment. One well-known change management model is Kurt Lewin's "Unfreeze-Change-Refreeze" model. This model consists of three main stages. First, the Unfreeze stage aims to unfreeze the status quo, raise awareness within the organization regarding the need for change, and reduce resistance to change. Second, the Change/Moving stage involves the implementation of change, whether in terms of processes, organizational structure, technology, or corporate culture. Lastly, the Refreeze stage focuses on crystallizing the new changes to become part of the organization's ongoing habits and culture (Burnes, 2020). Lewin's model assists organizations in effectively adopting change by ensuring that the changes made can be sustained and integrated with existing systems.

2.5 Risk Management

Risk management, according to COSO, is a process involving the board of directors, management, and personnel to identify and manage potential risks that may affect the achievement of corporate objectives, in alignment with the organization's risk appetite (Moeller, 2011). Applied across various industries such as banking and finance, risk management is essential for navigating the uncertainties of the industry 4.0 era, facilitating organizations in achieving sustainable growth and creating balanced value. Risks are categorized based on levels of uncertainty, event impact, proactive measures for the future, and their objectives. Decision-making utilizing a Risk Assessment Matrix aid in evaluating risks from low to extreme, prioritizing those with high impact and probability for effective management.

2.6 Critical Success Factor of Robotic Process Automation Implementation

Critical Success Factors (CSF) in the implementation of Robotic Process Automation (RPA) are essential elements that determine the success of RPA technology adoption. According to Plattfaut et al., (2022), there are 32 CSFs that can be categorized into three main aspects: organizational, developmental, and operational.

3. Research Methodology

The framework of this research is based on the research questions and explains the relationships between the concepts used. Based on Strategic Management concepts, the Critical Success Factor (CSF) in the implementation of RPA is part of Strategic Implementation, which is the stage of transforming formulated strategies into tangible actions.

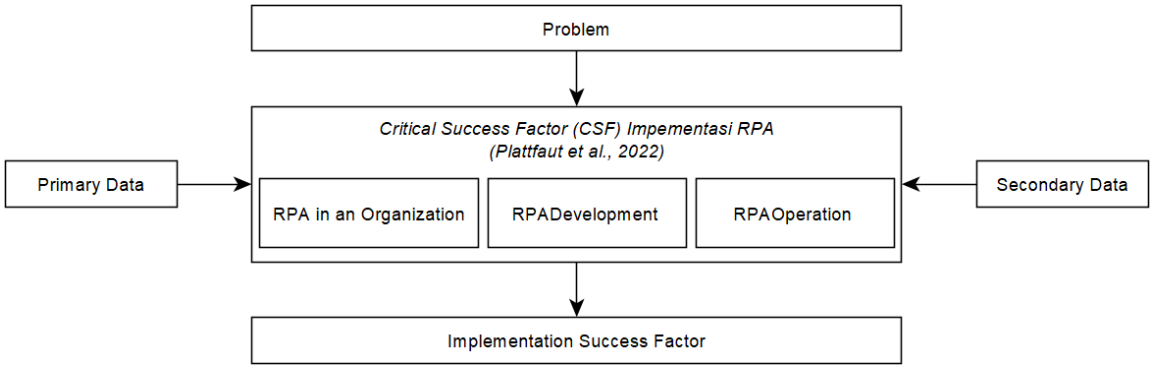

Fig. 2: Conceptual Framework

This research utilizes Creswell's Qualitative Analysis Technique along with Triangulation Validation to achieve a comprehensive understanding and ensure the validity of the findings. Creswell's qualitative analysis process consists of three primary stages: data reduction, data display, and conclusion drawing. In this process, qualitative data is broken down into smaller units, such as themes or categories, which are then presented in narrative or quotation format and interpreted to derive conclusions. Furthermore, triangulation validation involves gathering data from three distinct sources—interviews, observations, and documentation—to confirm the validity and consistency of the research results. By employing this approach, the study aims to reduce bias, improve the reliability of the findings, and offer a more holistic view, thereby contributing to a thorough, coherent, and valid understanding from multiple perspectives and methodologies. The focus of this study is a detailed case analysis of digital transformation through the application of robotic process automation technology, utilizing purposive sampling with 9 participants who represent various facets of the knowledge area. Data collection is conducted through a comprehensive research methodology, employing descriptive analysis techniques. The variables studied can be seen in the operational variable data that has been presented in Table 2

Table 2: Operational Variable

Variable	Interview Question	uestion Code
CSF for RPA in an Organization		
Make **Top Management support** RPA actively and drive aculture of change	How does top management in the organization support RPAimplementation and drive a culture of change?	A1
Involve **operational** and **IT staff early**	What is the role of operational and IT staff in implementingRPA?	A2

Actively plan and **develop** the necessary **skills of employees**	What does management do to ensure employees have the ability to work with RPA technology?	A3
Define **RPA governance** in terms of technology, standards, and organization	What are the ways to implement RPA governance, from a technology, standards and organizational perspective?	A4
Integrate RPA into **overall process optimization program**	How to integrate this RPA into overall process optimization initiatives?	A5
Address and **communicate the impact on human labor** and employees job satisfaction early	What efforts are made so that employees can understand the impact of RPA implementation on employee sustainability and job satisfaction?	A6
Investigate **automation alternatives**	What has been prepared as an alternative solution in implementing automation initiatives in the organization?	A7
Ensure **alignment** of RPA **initiatives with the overall strategy**	How to ensure that RPA is aligned with the overall strategy?	A8
Approach **RPA strategically** and not only as a tool for headcount reduction	How do organizations view RPA strategically in digital transformation and business process improvement beyond its benefits of personnel cost savings?	A9
Use a **staged approach** with a **PoC** and create an **MVP** focusing on technology, skill, governance, regulation, etc.	What is done regarding the phased approach to RPA implementation from the PoC (Proof of Concept) stage to MVP (minimum viable product) development?	A10
Be aware of the **process costs** as a basis for the creation of a **business case**	What is being done regarding the process costs that arise from the impact of converting manual business use cases to robots?	A11
Be aware and **communicate the limitations** of RPA	What is being done to bridge the overly high expectations of RPA implementation?	A12
Ensure **sufficient process knowledge** as the basis for automation	How to ensure a comprehensive understanding of business processes before automating using RPA?	A13
CSF for RPA Development		
Ensure managerial engagement across the RPA project	How to ensure strong top management involvement and support at every stage of RPA implementation?	B1
Involve all relevant **stakeholders** - especially process and IT specialists	How to ensure that the team formed to implement RPA is the right one to achieve success?	B2
Actively **train employees** for **changing role**	What kind of training system or model is appropriate for employees related to their roles alongside RPA technology?	B3
Ensure **compliance** with **IT**, **organization** and **security policies** and establish supporting tools/ processes	How do organizations adjust regulations for compliance with data policies, security, and policies applicable to RPA implementation?	B4
Select and **strategically develop processes** according to established criteria	What strategic processes are implemented to support the transition from manual processes, partial use of robots, to full use of robots?	B5
Carefully manage the **internal communication** and **staff redeployment**	How is communication built to ensure the team understands operational needs in line with end user needs?	B6
Ensure **adequate documentation** and **knowledge management**	How to manage documentation and knowledge databases related to RPA implementation so that they can be reused at a later time?	B7
Create a **center of excellence** that concentrates resources and knowledge	How to manage RPA in the long term, especially in relation to the activation of centers of excellence?	B8
Design for **scalable and flexible solutions** with a maintainable setup	How is this RPA development carried out so that it is dynamic with every change that occurs?	B9
Use a **standardized and structured development** approach	What is the standardized and structured development approach in RPA?	B10
Use vendors to skill up the organization	What is the role of RPA vendors in fulfilling the knowledge capabilities of the team in this RPA?	B11
CSF for RPA Operations		
Ensure sufficient **resources** and **priority of tasks**	How is resource planning and task prioritization done in RPA operations?	C1
Ensure sufficient **process knowledge to monitor bots**	How to ensure sufficient process knowledge to monitor bots?	C2
Train **operative employees for maintenance** tasks	What is the training concept for operational employees for maintenance tasks?	C3
Ensure **compliance** with **existing governance** as solutions scale and adapt tools and processes	How to ensure compliance with existing governance as solutions scale and adapt tools and processes?	C4
Plan for **continuous improvement** for automation solutions	How to plan continuous improvement for automation solutions?	C5
Adapt the organizational security framework to fit RPA	How to adapt an organization's security framework to suit RPA?	C6

Externalize the knowledge of the employees and ensure continuous knowledge management across the organization	How to ensure sustainable knowledge management across the organization?	C7
Continuously ensure high data quality in prior manual processes	What was done to continue to ensure high data quality in the previous manual process?	C8

Source: (Plattfaut et al., 2022)

From the aforementioned variables, the case study at PT Telkom Indonesia will be explored in depth through interviews with several informants possessing diverse knowledge from strategic, operational, and user perspectives. The following are the characteristics of the informants. Table 3 presents the characteristics of the informants.

Table 3: Characteristics of the Person Interviewed

Interviewee	Knowledge Area	Company	Question
N1-DK	Senior Leader who understands Strategic Aspect	Telkom	All
N2-HK	Senior Leader who understands Strategic Aspect	Telkom	All
N3-KB	Senior Leader who understands Strategic Aspect	Telkom	All
N4-ZR	Senior Leader who understands Operational Aspect	Telkom	All
N5-AP	Senior Leader who understands Operational Aspect	Telkom	All
N6-DN	Senior Leader who understands Operational Aspect	Telkom	All
N7-SF	Advanced User of RPA	Telkom	All
N8-FP	Advanced User of RPA	Telkom	All
N9-LS	Advanced User of RPA	Telkom	All

Source: Researcher's Compilation (2024)

In qualitative research, data analysis encompasses various stages aimed at comprehensively understanding and interpreting meticulously gathered information. One of the initial stages is data transcription, which involves converting all collected data—such as interviews, observations, or documents—from audio or visual formats into written text. Following transcription, the data undergoes coding, where labels or categories are assigned to relevant data units. This coding method facilitates the organization and categorization of data, enabling researchers to extract meaningful insights and identify patterns within qualitative information.

4. Results and Discussion

Results constitute the primary section of scientific articles and include the final outcomes without detailing the data analysis process or the results of hypothesis testing. These results may be presented using tables or graphs to provide a clearer verbal explanation of the findings.

4.1 Transcript

The initial step involves transcribing all collected data, which includes interviews, observations, and documents. The interviews were conducted based on the respondents' availability, with some taking place online and others in person. A total of 32 questions were posed to 9 respondents, resulting in 288 interview responses that addressed all aspects of Critical Success Factors (CSF) (Plattfaut et al., 2022)

In comprehending the observation transcript, it is essential to acknowledge its significance as a valuable instrument in qualitative research. The transcription process entails transforming observed events into written text to facilitate further analysis. Therefore, the observation transcript serves not merely as a record but as a crucial phase in the qualitative research process, offering the depth and context required for a thorough understanding (Table 5).

Transcribing documents enables researchers to access and comprehend the context and underlying meanings of written materials. In this study, in addition to conducting interviews with respondents, relevant supporting documents were utilized as supplementary data sources.

4.2 Grouping by Category

At this stage, the information obtained is categorized into broader and relevant groups to better understand the patterns and themes, thereby providing deeper meaning. Below is the categorization based on the results of the coding and themes (Tabel 4)

Table 4: Categorization Result

RPA in an Organization	RPA Development	RPA Operation
Strategic Support and Management Commitment	Top Management Support	Resource Management
Organizational Structure and Culture	Monitoring and Review	Training and Competence
Competency Development and Training	Competence and Expertise	Monitoring and Evaluation
Communication	Policy and Regulatory Compliance	Compliance and Governance
	Documentation	
	Change Management	

Source: Researcher's Compilation (2024)

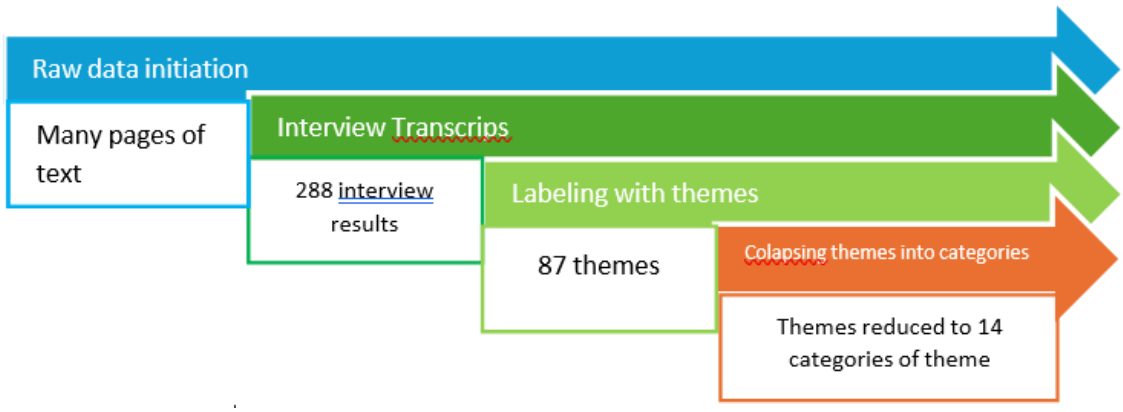

Fig. 3: Resume of Data Processing

4.3 Validation

This method entails gathering data from multiple sources, as illustrated in Table 5, which includes the outcomes of interviews, observations, and documents pertaining to the implementation of RPA at PT Telkom Indonesia. This approach enables researchers to integrate perspectives and information from diverse viewpoints, thereby enhancing the reliability and validity of the research findings.

Table 5: Triangulation Verification

CSF	Interview	Observation	Document
RPA in an Organizations	Top management in the organization strongly supports the implementation of RPA and actively encourages a culture of change in terms of policies, resources, and organizational culture. Several policies are seen that are digital-based, resources are prepared dedicatedly to run RPA, and organizational culture is encouraged through major activities involving all employees, namely the RPA Festival. The organization has established a dedicated unit to manage RPA , the Intelligent Automation Center of Excellence (COE). Strategies and policies have been set, and an RPA technology roadmap has been	The Director of Finance and Risk Management of PT Telkom Indonesia as top management in 2021 conveyed at the largest forum in TelkomGroup, namely TelkomClick2021, that the target of 75% of manual processes will be automated with Robotic Process Automation (RPA). In carrying out this, several strategic steps as a form of full management support for the RPA initiative, including: Establishment of specific Key Performance Indicators (KPIs) on RPA for the Finance	Intelligent Automation Center of Excellence (COE) Organization In the CSS document, it is stated that the 5th Strategic Initiative of WIN DIGITAL is Increase Group Technology Integration & Digitization with one of its key activities being digitizing internal operations . Continued with the CAM (Corporate Annual Message) document in 2021 stating that one of the strategic directions for FU FRM is " Accelerate reporting digitization enhancement ...". This is also aligned with the FU FRM
	loped. Business processes have been standardized and redesigned for efficiency, with benchmarking against global practices and internal assessments. To improve employee capabilities and competencies towards RPA, various internalization and socialization efforts are carried out. Information and training are provided in stages, ensuring that all levels of employees understand the benefits of RPA, such as efficiency and increased productivity. Change Team Management , Risk Management , and Human Capital works together to ensure RPA acceptance across the organization. The phased approach to implementing RPA in an enterprise involves several key stages, starting with external and internal assessments to identify potential areas for automation. Full implementation occurs after these stages are met, as well as ongoing monitoring and development to improve system functionality and integration. All of this is done with attention to information technology governance (ITGC) and data security rules, and involves consulting with external parties to establish appropriate SOPs and procedures.	tor and granular down to his/her ranks; Incorporating RPA initiatives into the Directorate of Finance & Risk Management Master Plan; In the Company Work Plan and Budget (RKAP) specifically related to RPA, a budget is prepared; Massive penetration to employees by providing knowledge and creating a culture of innovation, especially for RPA through the RPA festival event which is competed between units in the KMR Directorate routinely every year to produce innovations in the RPA field. Establish a special organization, the Intelligence Automation Center Of Excellence (CoE), as a unit that fully manages RPA in the KMR Directorate end-to- end . Organizationally, it also collaborates with other relevant units such as: Corporate IT Division, HCM, and units related to policy sses and IT governance.	er Plan document which highlights Finance Transformation by establishing a Finance Factory organization , namely the Telkom Shared Service Center Division organization which includes the Center of Excellence Intelligent Automation (COE IA) sub-division as the implementing function for automation of the Financial business process at Telkom. Human Resource Development In line with the establishment of the Center of Excellence organizational model , in the FU FRM Masterplan document through the "ADAPTIVE" strategy in the letter "T - Talent Center of Excellence " which is a strategy in developing employee talent in improving the capabilities and competencies of Finance employees including in RPA technology.
RPA Development	The organization makes regulatory adjustments for compliance related to data and security policies by involving the Cybersecurity unit, PDP in Corsec, and Risk Management to consolidate risks. This process begins with a thorough evaluation to identify the impact and suitability of the policy, and makes necessary adjustments by involving various teams such as FPP, RM, Legal, TSSC, IT Division, and Process Owners. Policies must be reviewed and updated periodically to ensure all systems and processes comply with applicable regulations, the standards used are stated in the IT General Control to regulate data security	The development of RPA in the KMR Directorate is carried out comprehensively. The development team formed consists of members who are competent in RPA because the initial step is to form people's competence through a series of relevant training, in addition, understanding of business processes is always maintained because the development process always involves user units that run daily business processes. The regulatory unit for both data processes and policies and data security is always involved so that	Compliance with Company Policies, Regulations, and Development Standards in the Company There is clear guidance on how this RPA can be implemented to comply with Company policies and Regulations, namely in the Information System Access Control Management Standards document Version 2.0 of 2018 (PR.146/2018) and the Information System Application Development Standards (SPASI) document Version 4 of 2019. The policy regulates the development standards of an application from

	and compliance. Telkom applies a standardized and structured development approach in RPA by combining SDLC and Business Model Canvas principles, ensuring that each project adheres to strict standards before implementation. The company involves external parties to understand industry best practices and compare them with Telkom's internal conditions, as well as adopting global standards applied by international partners. This process includes governance and standardization formed with the help of experienced consultants, ensuring that RPA development is carried out in a fast, efficient manner, and in :dance with industry best practices. Long-term RPA management in Telkom is carried out through the establishment of a Center of Excellence (COE) that has been prepared with personnel, budget, and tools supported by the highest Radir forum. COE aims to overcome the development of RPA that previously ran in silos, by uniting, prioritizing, and managing all RPA initiatives as a whole. The initial focus of COE is to ensure effective and efficient RPA implementation and expand it to other units and subsidiaries. COE also plays a role in determining priorities, creating standards, and managing all RPA activities, including identifying best practices to create shared benefits for the entire Telkom Group. RPA vendors play a crucial role in the procurement and development of RPA solutions at Telkom by providing certified tools and sharing in-depth technical knowledge. While vendors help speed up the process and provide initial support, Telkom seeks to reduce its dependence on vendors by enhancing internal ɔilities through more effective knowledge transfer.	this development continues to meet the compliance aspect. The standard and structured development principles also follow how the company regulates this by referring to the IT development standards that apply in the company. Vendors act as a shortcut in accelerating the process of knowledge transfer and building capabilities within the company.	initiation to post-implementation, there are also provisions regarding IT aspects, security, and organizational regulations. There is an IT General Control Document which is the basis for managing process audits in every IT tool used in the company.
RPA Operation	SOA reviews are used to identify sub-processes that can be automated with RPA and ensure adequate management support and resource allocation. Regular user feedback, as well as periodic performance reviews, are essential to capture the need for process improvement and expansion. Improvement implementation is done through workshops, summits, and dashboards for monitoring and setting KPIs. Consistent evaluation of governance and external trend analysis also support continuous improvement. Involve IT and cybersecurity units from the beginning of development to ensure all security standards are met. Each robot must have a username associated with a specific employee, who is	RPA operations are carried out by the Center of Excellence (CoE) Intelligence Automation unit , which is an organization that is authorized to manage RPA end-to-end. People capabilities for RPA operations are formed through technical and business training on understanding activity logs, automated flows, and lem-solving capabilities if a bot experiences problems. Security and governance are strengthened by involving IT and data security units, to ensure compliance with strict security standards and data access policies.	Continuous Improvement of RPA The TSSC Intelligent Automation COE Management Review Document periodically in its report conveys the improvements to the RPA process that have been made as well as the long-term improvement plan that will be carried out on the processes and sub-processes in an RPA automation process cycle. In addition to the process improvement plan, the document also contains technological improvements used to achieve the efficiency benefits of this RPA.

	responsible in the event of a security breach. RPA must comply with the organization's security framework, including strict data access policies and governance that includes user access metrics and reviews. In addition, there needs to be coordination with the PIC regarding internal regulations to comply with applicable regulations, as well as ensuring that RPA implementation is carried out ully, especially in handling sensitive data.

Source: Researcher's Compilation (2024)

4.4 Discussion

To facilitate the understanding of findings and analytical results, researchers develop an infographic that simplifies complex information, making it easier and quicker for readers to grasp. Below is the infographic diagram from this study, as illustrated in Figure 3.

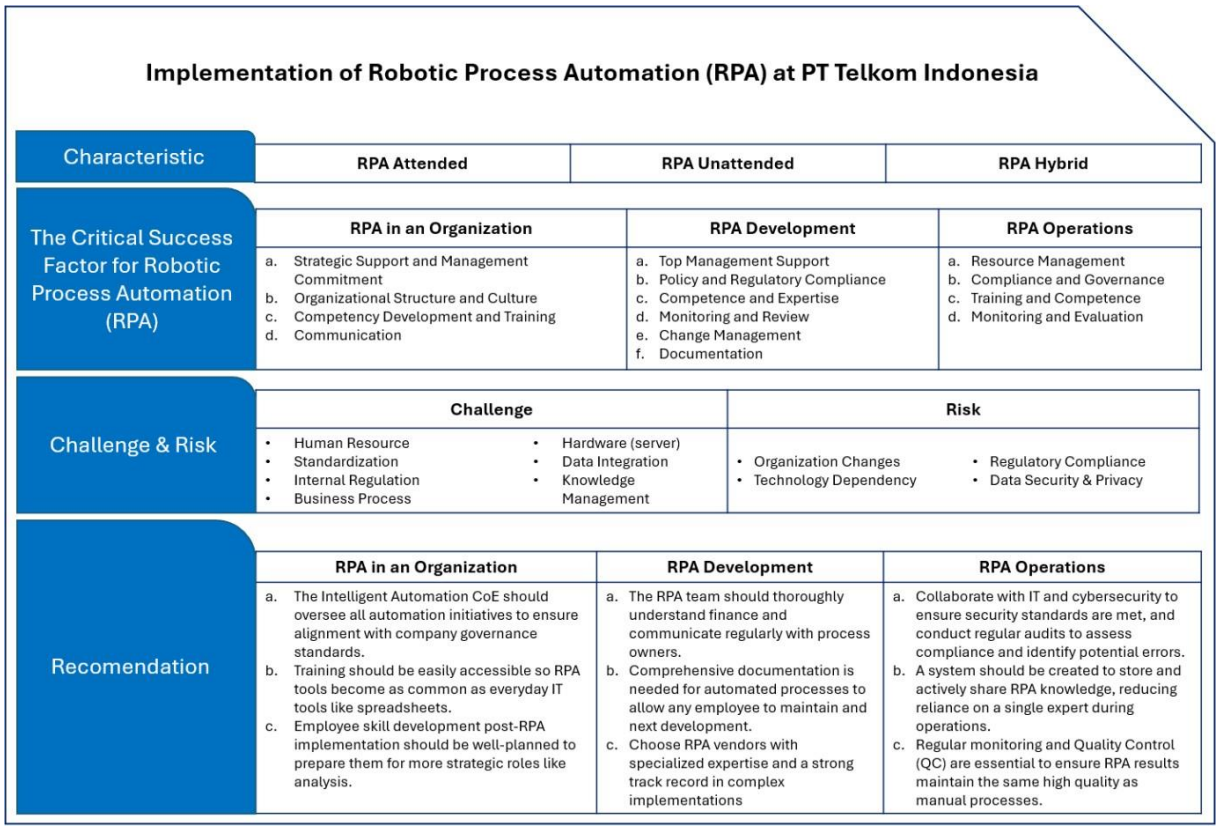

Fig. 3: Infographic of Digital Transformation Research Results on RPA Technology Implementation at PT Telkom Indonesia

In the Digital Transformation initiative led by the Directorate of Finance and Risk Management at PT Telkom Indonesia, previous analysis identified key success factors in the implementation of Robotic Process Automation (RPA), while also highlighting areas for improvement.

Recommendations to address these gaps include: (1) Organizational RPA: The Intelligent Automation Center of Excellence (CoE) should orchestrate business process automation across all units to ensure alignment with corporate governance standards, enhance collaboration, and provide accessible training to employees through mandatory e-learning programs. This would foster a strong organizational culture that supports digital transformation by enhancing collaboration between stakeholders (Sutjipto, 2019). Moreover, organizational culture should be widely promoted, as it can guide and motivate employees to innovate and take risks (Indiyati et al., 2021). Additionally, employees whose tasks are supported by RPA should be prepared for more strategic roles. (2) RPA Development: The RPA development team must bridge the knowledge gap between technical and financial expertise through regular communication and comprehensive documentation. Human resource development plays a crucial role in bridging this knowledge gap between teams (Danusaputro et al., 2024). Collaboration with experienced vendors is essential for managing complex RPA implementations. (3) RPA Operations: Collaboration with IT and cybersecurity teams is necessary to ensure compliance with security standards, with regular audits being essential. Knowledge transfer systems must be established to prevent knowledge centralization, while continuous monitoring and quality control should be implemented to maintain high-quality RPA outcomes.

5. Conclusion

The analysis of factors contributing to the success of digital transformation through the implementation of RPA technology in the Finance and Risk Management Directorate of PT Telkom Indonesia includes several key areas. For RPA in the organization, essential elements consist of strategic support and management commitment, organizational structure and culture, competency development and training, and effective communication. In terms of RPA development, critical factors involve top management support, compliance with policies and regulations, competencies and expertise, oversight and review, change management, and thorough documentation. Finally, for RPA operations, important considerations encompass resource management, compliance and governance, training and competencies, as well as monitoring and evaluation. Together, these factors form a comprehensive framework for assessing the successful implementation of RPA in the organization.

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