Utilizing RPA in the Financial Sector- An EY Case Study on Cost Reduction and Efficiency

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1. THE ABSTRACT

This research explores the potential for Ernst & Young (EY) to leverage Robotic Process Automation (RPA) in the financial sector with a focus on Accounts Payable, Accounts Receivable, and General Ledger processes. Thematic analysis revealed prevalent manual processes indicating that automation could significantly enhance efficiency and strategically allocate human resources. The key themes include operational inefficiencies, financial process optimization, skills development and training, employee well-being, efficiency and strategic solutions, risk in automation, and building agile teams.

The study identified challenges such as communication gaps, employee unhappiness, and concerns about job security within EY's finance team. To address these challenges, various models and frameworks were proposed aligning with identified themes. Solutions include the application of Six Sigma for operational inefficiencies, the 70:20:10 model for skills development, Agile Risk Management for handling risks in automation, Lewin's Change Management Model for addressing change-related challenges, and the Scrum framework for building an agile RPA team.

The discussion highlights the relevance and application of each model emphasizing the need for a systematic approach to problem-solving. The proposed models offer tailored solutions to specific challenges within EY's financial processes, providing a roadmap to navigate complexities and enhance operational efficiency and employee well-being through RPA adoption.

CHAPTER ONE

2. INTRODUCTION

Organization Overview: Ernst & Young (EY) is a multinational professional services firm and one of the largest of the "Big Four" accounting firms globally that is founded in 1989 through the merger of Ernst & Whinney and Arthur Young & Co. EY provides a wide range of professional services that include assurance, tax, consulting, strategy, and advisory services and the firm has a vast global presence with offices in numerous countries and serving clients across various industries.

RPA Overview: Robotic Process Automation (RPA) is a technology that utilizes software robots or "bots" to automate repetitive and rule-based tasks within business processes. These bots mimic human interactions with

digital systems and perform tasks such as data entry, transaction processing, and communication across various software applications. RPA aims to increase efficiency, accuracy, and productivity by automating routine tasks and allowing human workers to focus on more complex and value-added activities (Ribeiro et al, 2021, pp.51-58). There are several RPA tools in the market, such as UiPath, Automation Anywhere, and Blue Prism.

3. BACKGROUND OF THE RESEARCH PROBLEM

The research tackles manual inefficiencies in EY's client financial processes such as Accounts Payable, Accounts Receivable, and General Ledger. Repetitive and Rule-based manual processes in finance create inefficiencies and high costs and despite technological progress, these processes remain error-prone and costly therefore, the study focuses on the use of UiPath RPA for automation to address these challenges. The issue stems from the absence of automation which impacts efficiency, accuracy, and cost-effectiveness negatively (Fernandez et al, 2018, pp.123-132). Through qualitative interviews, the study aims to understand the opportunities and challenges of RPA implementation and the business value that lies in RPA's potential to reduce errors and enhance efficiency while positioning EY competitively and the focus is on practically applying RPA to cut costs and improve efficiency in crucial financial operations.

4. SCOPE

4.1. Aim

This initiative showcases the potential for Ernest & Young to leverage Robotic Process Automation (RPA) within the financial sector and aims to reduce costs and enhance efficiency for clients by focusing on repetitive manual processes in Accounts Payable, Accounts Receivable, and General Ledger. Using RPA aims to make things run smoother, cut down on mistakes, and speed up how quickly tasks get done It also helps to save on manual labor costs and ensures that processes are free from human errors. Additionally, the aim is to make these processes human-independent, allowing the automation solution to be run at any time as needed, leading to the achievement of desired results.

4.2. Research Question and Objectives

Research Question	Research Objective
How does Robotic Process Automation enhance efficiency in financial processes, particularly in Accounts Payable, Receivable, and General Ledger maintenance which helps its client to save cost and improve efficiency?	This study assesses how using Robotic Process Automation (RPA) in financial processes like accounts payable, receivable, and General Ledger maintenance saves time and enhances overall efficiency.

How does EY's finance department manage RPA specifically in terms of having a small in-house team versus relying on the central RPA team or Center of Excellence?	Examine EY's finance department to assess the utilization and impact of an in-house RPA team versus reliance on the central RPA team or Center of Excellence.
How is Ernst & Young's finance team working on their advanced skill development and what level of support are they receiving from the management?	This study looks at how EY's finance team is developing advanced skills. We want to see what strategies they're using and how much support they get from management in this skill improvement process.
Does Ernst & Young's finance team face the risk of operational delays and inefficiencies if automation is initiated in their current operations?	This study aims to check the risks for EY's finance team if they use automation. We want to find out what challenges might come up and how they could affect the team's efficiency.

4.3. Outline of Methodology

The research takes a qualitative approach that focuses on understanding the challenges and opportunities in RPA implementation in EY's Client Financial Operations and participants from EY's operations will be purposefully sampled specifically in the general ledger, accounts payable, and receivable and this study aims to reveal insights into RPA complexity through in-depth interviews and content analysis of interview transcripts will identify patterns and aligning to showcase manual processes in daily operations and the data validity will be ensured through triangulation and merging opinions from multiple interviewees where the reliability will be maintained through strict guidelines and comprehensive documentation.

4.4. Research Significance

This study is crucial as it fills a vital gap by practically exploring how Ernst & Young (EY) can leverage Robotic Process Automation (RPA) in its client financial operations and it addresses the challenges and opportunities of RPA implementation by Focusing on areas like general ledger and accounts. The research contributes practical insights into driving down costs and boosting efficiency for EY's clients by particularly showcasing the potential of UiPath RPA tools and using a qualitative approach with in-depth interviews has not only uncovers RPA complications but also aligns with real-world scenarios that provide valuable perspectives. Lastly, through triangulation and strict guidelines, this research aims to offer actionable insights for EY and advance the broader understanding of RPA's impact in the financial sector.

We can save a lot of manual labor hours by automating repetitive tasks and this shift makes the process less reliant on human involvement and decrease the chances of errors. At the same time, employees can use their time for more productive work.

4.5. Format of a Business Project Report

The business report begins with an introduction that provides an organizational overview, offering insights into Robotic Process Automation (RPA) while outlining the research problem's background, scope, and objectives. The literature review explores key areas such as digitization in financial operations, general ledger management, accounts payable and receivables, and the implementation process of RPA with the UiPath tool. It elucidates the UiPath operating model and discusses building an agile RPA team with the Scrum framework. Within the same section, it addresses risk assessment using the Agile Risk Management Framework, thematic analysis framework, Six Sigma methodology with its DMAIC, and skill management using the 70:20:10 model. The research methodology section explicates the philosophy, approach, time horizon, and strategy with technique. Subsequently, findings, analysis, and discussion sections present the outcomes and insights. The research concludes with a robust set of conclusions and recommendations.

CHAPTER TWO:

5. LITERATURE REVIEW

According to Boote & Beile (2005, pp.3-15), the literature review is a critical examination of existing scholarly works that are relevant to a particular topic or research question, Graham (2011, pp.224-225), states that It establishes the basis for current research by summarizing and evaluating prior studies identifying gaps and trends and justifying the significance of new research. A literature review informs the research methodology by guiding method selection and question formulation and in findings, it contextualizes results within existing knowledge aiding interpretation (Ortiz, 2007, pp.205-207).

Within this study, the literature review delves into models, tools, and frameworks to underpin the inquiry about In what way the integration of Robotic Process Automation contributes to optimizing financial processes specifically in the domains of Accounts Payable Receivable and General Ledger maintenance through the automation of routine manual tasks resulting in substantial time savings in manual labor hours?" This review assists the EY team in executing the end-to-end automation solution and aids in bridging communication gaps and managing change effectively with risk management.

5.1. Digitization in Financial Operations

5.1.1. General Ledger

EY, a global professional services firm can explore automation for clients, particularly in automating general ledger management is pivotal for business efficiency and offering benefits such as improved accuracy and time and cost savings that enhance compliance and real-time financial data access (Gridlex, 2024). The manual processes involved in General Ledger management encompass tasks such as data entry, transaction categorization, and report generation. Whereas, Russo (2022) argues that manual ledger entries can pose challenges such as time-consuming input, error-related delays, and the risk of inaccurate statements.

KPMG's July 2021 report advocates for Robotic Process Automation (RPA) in finance's digital transformation with RPA streamlines tasks which enhances efficiency and aids CFOs in strategic focus. Considerations for automation include error-prone and rule-based with 24/7 high-volume complex tasks are suitable processes for RPA ranging from compliance to price comparison that offer benefits like visibility, security, and cost reduction (KPMG, 2021).

Whereas, in Gartner's press release, Lavelle (2019) highlighted the potential of Robotic Process Automation in finance departments and the report stated that deploying RPA in financial reporting processes could save finance teams up to 25,000 hours annually, primarily due to the reduction of avoidable rework caused by human errors. However, only 29 per cent of finance departments utilizing RPA have applied the technology to financial reporting, missing out on significant efficiency gains.

5.1.2. Account Payable and Receivables

EY can not only automate the general ledger management but can also explore the potential of RPA in automating client accounts payable and receivable processes and this will enhance efficiency and achieve cost savings in these critical financial functions. In accordance with the study by Kuprina (2017), Manual accounts receivables processes involve creating invoices and sending them to customers and tracking payments and also the team follows up on overdue payments by maintaining documentation and ensuring accurate financial records. On the other hand, as per the study by Tuychiyev (2010), the manual process in Accounts Payable involves the manual entry, verification, and processing of invoices, often leading to increased errors and longer processing times. According to the article by Lhuer (2016), an RPA presents a remarkable 30–200 per cent ROI in its first year by automating repetitive tasks through software that mimics human actions. While some studies suggest significant RPA ROI varies based on automated processes and the organization's infrastructure and implementation strategy. For example, a study in Deloitte by Horton (2017) emphasizes the impact of automation level and process complexity with results differing across organizations, and achieving claimed ROI figures is not guaranteed universally.

As per Taylor (2022), The global RPA market witnessed substantial growth from $0.8 billion in 2017 to $10.5 billion in 2023 showing a 1,212.5 per cent increase over six years. Despite concerns about job displacement the surge reflects the market's impressive expansion where a study by Chui et al. (2016) argues that while automation can create new opportunities it also has the potential to eliminate certain jobs particularly those involving routine and predictable tasks.
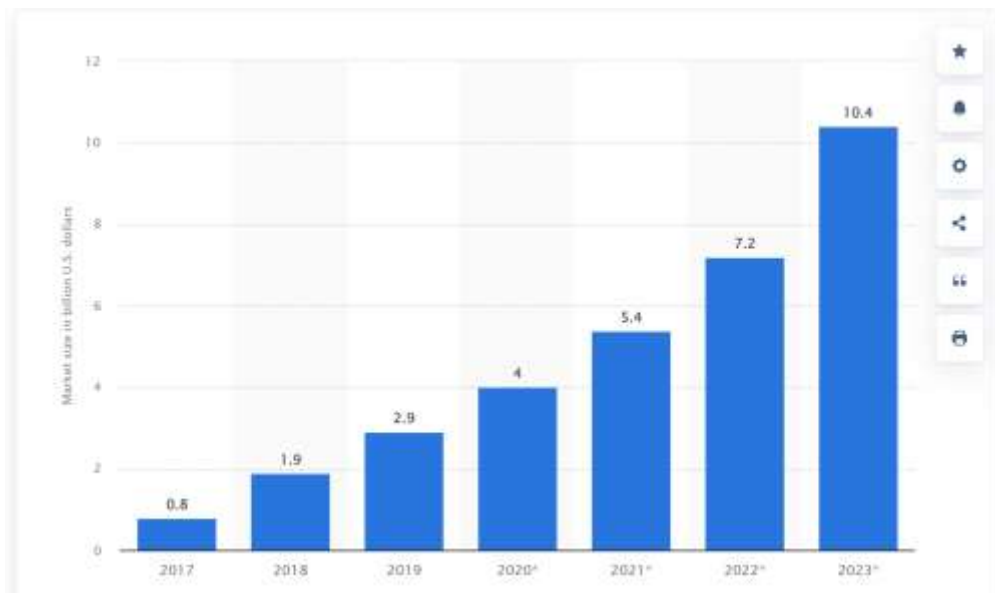
Figure 1 Robotic process automation market size worldwide 2017-2023 (Taylor, 2022).

5.2. Implementation Process in RPA

5.2.1. RPA with UiPath Tool

UiPath Inc., based in New York is a global leader in RPA solutions which provide an AI-integrated platform for end-to-end automation. The company emphasizes low-code development for easy automation creation and prioritizes corporate governance, contributing significantly to process efficiency and digital transformation across industries. (Velocity, 2023). There are a lot of RPA tools in the market such as Automation Anywhere, Blue Prism, and Microsoft Power Automate but when navigating the world of Robotic Process Automation (RPA) it's crucial to assess top platforms like UiPath which is known for a remarkable 94 per cent customer satisfaction (UiPath, 2023) and also UiPath (2019) study show RPA implementation leads to improved efficiency (86 per cent) and deeper customer insights (67 per cent) with enhanced customer service (57 per cent).

5.2.2. Uipath Operating Model

According the the study by Catalli (2020), many companies follow four stages to effectively expand their automation efforts as illustrated in the diagram below as a company moves through these stages the leader supporting automation where automation comes from and the reasons for investing in it will all evolve which leads to the growth and improvement of the automation operating model. Whereas McKinsey Digital reports that integrating RPA can yield a 30 per cent to 200 per cent increase in ROI within the first year, while the Institute of RPA predicts potential labor cost savings of 25 per cen to 40 per cent through RPA solutions (Lhuer, 2016; Gartner, 2023, pp.1-19), whereas, as per Deloitte a substantial 78 per cent of organizations intend to notably boost their RPA investments within the next three years (Vemulapalli, 2020)
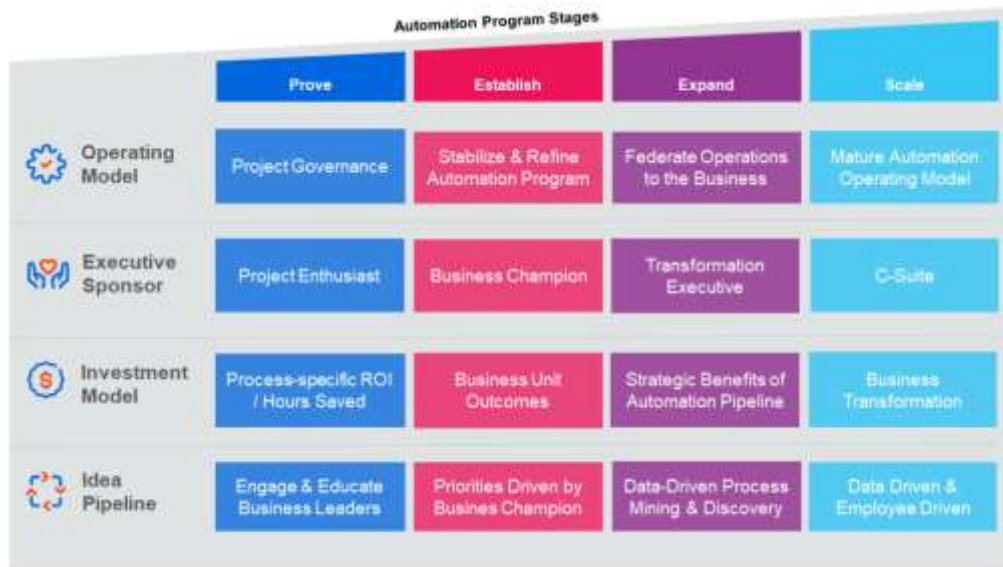
Figure 2 Automation Program Stage (Catalli, 2020)

In the proving stage, a few initial processes are automated with less than 10 software robots in a single department to showcase the effectiveness of the technology and garner support typically lasting a few weeks to three months (Catalli, 2020).

In the Establish stage, processes are actively implemented and completed within a business area, lasting three to six months challenges may arise if automation sources are concentrated in one unit and if there's limited understanding of RPA across the organization that potentially leads to stagnation without clear accountability and a need for adjustments in the automation operating model (Catalli, 2020).

During the expansion phase, a comprehensive plan for automation is established that enables standardized onboarding of multiple business units over one to three years and the organization gains a full understanding of RPA benefits, and key performance indicators (KPIs) are clearly defined and tracked (Yurovsky, 2019). Whereas, as per Violino (2020), the developers in the automation will be concentrating on high-ROI (Return on Investment) opportunities it's evident that the organization needs to enhance the skills of its employees to tackle various straightforward, team-level, and personalized automation tasks that also state by Wu (2020) that the upskilling the staff by supporting certain employees to become RPA citizen developers and enabling them to create automation for their teams and departments

In the Scale phase, the team deploys advanced automation technologies organization-wide and embraces a "robot for every person" approach with business champions promoting RPA while citizen developers implement automation from the bottom up and executive sponsorship often led by a CEO or CFO integrates RPA into broader digital transformation initiatives (Sukavanam, 2019). Whereas Garter et al, (2022) argue that scaling automation often faces challenges such as integration complexities, resistance from employees high initial costs, and the need for continuous adaptation to evolving technologies. Balancing human-machine collaboration and ensuring seamless integration with existing systems are key hurdles in successfully scaling automation.

5.3. Building the RPA Agile Team

5.3.1. Scrum Framework

According to Kissflow (2023), the agile team has experts with diverse skills who collaborate to develop a product efficiently and the team structure is optimized for time and resource utilization which enables the swift breakdown and completion of larger projects compared to conventional teams (Kissflow, 2023).

As per Schwaber (2019), the team consisting of a Scrum Master, a Product Owner, and Developers is a cohesive, cross-functional, and self-managing unit focused on a Product Goal and it remains nimble with around 10 members and productive but far too large then it may reorganize into multiple teams sharing the same goals and the team is responsible for all product-related activities that empower to manage their work and accountable for delivering a valuable increment every Sprint.

Table 1 Scrum Team Members

Developer	In the Agile Team the developers are individuals dedicated to producing a usable Increment every Sprint and the required skills for developers are diverse and depend on the specific domain of work developers bear the responsibility of crafting a Sprint plan, the Sprint Backlog, ensuring quality through adherence to a Definition of Done by adjusting their plan daily towards the Sprint Goal and maintaining accountability among themselves as professionals (Schwaber, 2019).
Scrum Master	The Scrum Master ensures adherence to Scrum principles by creating understanding within the team and organization and they enhance the Scrum Team's effectiveness by enabling continuous improvement within the Scrum framework by serving as leaders the Scrum Masters support the team through coaching in self-management, focusing on high-value Increments, removing impediments, and ensuring positive and timely Scrum events and they also assist the Product Owner in techniques for effective Product Goal definition, clear Product Backlog items, empirical product planning, and facilitating stakeholder collaboration (Schwaber, 2019).
Product Owner	The Product Owner is responsible for maximizing the product's value from the Team's efforts with varied approaches across organizations and their accountabilities include defining and communicating the Product Goal, creating, ordering, and ensuring transparency of Product Backlog items and the Product Owner may delegate tasks but remains accountable, requiring organizational respect for their decisions, visible in the Product Backlog's content and order. The Product Owner the one person representing stakeholders makes decisions that can be influenced by convincing rather than forming a committee (Schwaber, 2019).

5.4. Risk Assessment

According to Carmichael (2023), risk assessment is essential in IT projects to proactively identify potential challenges allocate resources efficiently, and ensure project timelines are met. It helps in prioritizing risks and supporting decision-making while communicating effectively with stakeholders and by addressing potential

issues early on the IT teams can enhance project resilience and maintain quality standards which increase the overall likelihood of project success in the dynamic and complex IT environment.

5.4.1. Agile Risk Management Framework

ISACA defines risk as the likelihood and impact of an event which considers both potential benefits and barriers and in business the opportunities and risks are intertwined especially in activities with uncertainties In Agile project delivery it's crucial to assess these risks to decide which ones to pursue and anticipate the expected value in return (Carmichael, 2023).

Figure 3 Agile Risk Management Process Cycle (Carmichael, 2023).

Before each sprint and at the project kick-off the risks are discussed in the setting context step and the stakeholders including the project team identify and prioritize risks and address high-risk requirements early in the sprint cycle. Regular updates to a risk register occur throughout the project's sprint cycles. (Carmichael, 2023).

In the Risk Assessment Steps: Identify, Analyze and Determine at the beginning of the project cycle the team looks at the product backlog during the sprint planning meeting. They discuss the risks related to each requirement, identify and evaluate new risks, and plan how to respond this helps the team become aware of potential issues and take planned actions such as identifying problematic features without solutions during the sprint planning session and also the team might decide to do an architectural spike (a proof-of-concept) during the sprint to explore viable solutions (Carmichael, 2023).

Hamilton-Whitaker (2009) states that the team plans the tasks for the sprint they take into account any potential risks and they have to make sure that the sprint includes tasks to address these risks and ensure a successful delivery also an important result is the update of the product backlog to include risk-related activities for the product features and this way the future sprint cycles will consider these tasks when estimating effort and planning the sprint tasks (Carmichael, 2023).

According to Reaiche et al (2022), agile risk monitoring uses scrum events like stand-ups and sprint reviews to manage deliverables and meet stakeholder expectations which reduce the risk of unsatisfactory solutions and retrospectives identify risks at project and sprint levels also the success relies on shared understanding, team commitment, and active engagement in decision-making with a strong foundation of risk ownership.

5.5. Lewin's change management model

According to Hussain et al (2018, pp.123-127) Lewin's Change Management Model was developed by psychologist Kurt Lewin and is a three-stage framework designed to guide organizations through the process of initiating and implementing change the model emphasizes the psychological and social aspects of change which focus on how individuals and groups respond to and adapt to new circumstances. The three stages of Lewin's model are:
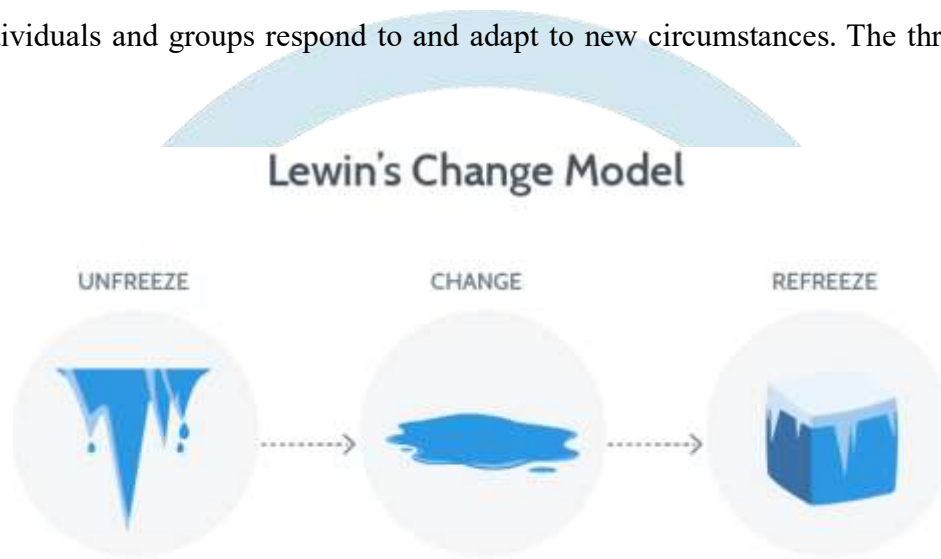
Figure 4 Lewin Change Model (Mulholland, 2023)

The initiative transforms the organization by changing mindsets and behaviors, fostering awareness, and addressing resistance and it includes recognizing the need for change, effective communication, and overcoming biases. "Unfreezing" destabilizes the current state for a shift in perspective essential for successful organizational transformation. Whereas as per OCM Solutions (2019), the drawback of the Unfreeze phase in Kurt Lewin's Change Model within OCM Solution lies in its potentially combative nature, rigidity, and perceived lack of detail for complex change scenarios.

In the Change stage, the emphasis is on executing planned transformations deploying new elements and actively involving employees highlighting the importance of continuous learning effective communication, and comprehensive education for successful implementation. Hussain et al (2018, pp.123-127) argue that its simplicity may lack the detailed guidance needed for complex organizational transformations, potentially leaving gaps in the change strategy.

The Refreeze stage solidifies changes in the organizational culture making them the norm by reinforcing behaviors, celebrating successes, and establishing feedback for continuous improvement highlighting the need for regular reviews and reinforcement for lasting impact. According to Malik (2022), In Lewin's Change Model, the "Unfreeze" phase involves preparing for change creating urgency gaining buy-in, and addressing concerns through communication and strategic analysis.

5.6. Thematic Analysis Framework

The six-step thematic analysis process outlined in the article on Interaction Design Foundation by Mortensen (2019), guides researchers in systematically analyzing user interview data It begins with familiarization, where researchers acquaint themselves with the extensive data followed by generating initial codes to categorize and

describe the content. The process advances to developing themes by collating and interpreting codes into broader patterns across interviews.
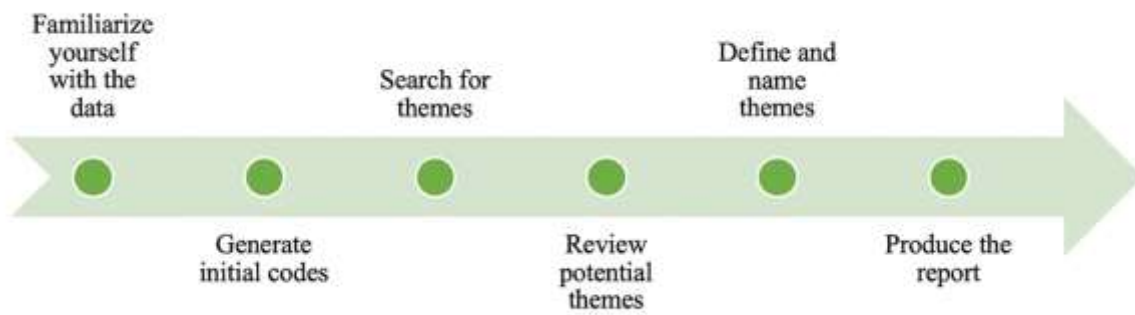
Figure 5 Thematic Analysis steps (Ustuk, 2020)

Reviewing themes ensures coherence, identifying contradictions, and refining them as needed. Defining and naming themes clarifies their essence and relevance, contributing to a coherent narrative. Finally, producing the report involves compiling findings, using quotes or multimedia with participant consent, and maintaining transparency about the research process. The process emphasizes flexibility, making thematic analysis applicable to both explorative and deductive studies while highlighting the importance of honesty and transparency in representing the data and ensuring the validity of research results (Mortensen, 2019).

5.7. Six Sigma Methodology with its DMAIC

The Six Sigma methodology with its DMAIC approach is a structured and data-driven strategy for process improvement. DMAIC stands for Define, Measure, Analyse, Improve, and Control. It provides a systematic framework to identify, analyze, and enhance processes, with the ultimate goal of minimizing defects and variations. According to the case study by Gaikwad et al (2017, pp.229-238), the DMAIC approach improves operational efficiency by defining problems measuring performance analyzing root causes, and implementing targeted improvements, This systematic methodology fosters a culture of continuous improvement, optimizing resources, and deepening process understanding for lasting enhancements.

The phases are as follows:

Figure 6 Six Sigma DMAIC (Lee et al, 2015)

Define: Clearly articulate the problem, project goals, and customer requirements. Establish the boundaries of the process under consideration.

Measure: Quantify the current state of the process to establish a baseline. Collect relevant data and metrics to understand the magnitude of the issue.

Analyze: Investigate the data to identify root causes of problems and inefficiencies. This phase aims to uncover the reasons behind variations in the process.

Improve: Develop and implement solutions to address the identified issues. This phase focuses on making necessary changes to enhance the process and achieve the desired improvements.

Control: Establish controls and measures to sustain the improvements over time. This phase ensures that the process remains within the desired parameters and continues to deliver improved outcomes. The DMAIC methodology is widely used in various industries to enhance operational efficiency, reduce defects, and optimize processes for better overall performance.

5.8. Skill Management: The 70:20:10 model

As per the report on Harward Business Review report by Glaveski (2016), global spending on training reached $359 billion. However, dissatisfaction among managers stands at 75 per cent of employees lack essential skills only 12 per cent apply newly acquired skills to their jobs and merely 25 per cent perceive training as effective in enhancing performance existing training drawbacks involve timing issues irrelevant content focus, and rapid forgetting of acquired knowledge.

The 70:20:10 model emphasizes on-the-job experience (70 per cent), social learning (20 per cent), and formal training (10 per cent), serving as a guide for effective training program balance and fostering a high-performance learning culture (Cloke, 2022). As per Jos Arets (2018), the 70:20:10 model revolutionizes the approach to work, performance, and learning in the 21st century and its implementation shifts the focus from formal learning solutions to seamlessly integrating learning into the workflow.

Figure 7 70-20-10 Training Model (Nunaley, 2021).

According to Nunaley, (2021) the Implementation of the 70-20-10 model involves carefully planning and balancing experiential, social, and formal learning components which designed courses with a mix of engaging elements like videos, activities, and peer discussions and maintaining a strategic approach avoiding overemphasis on one aspect. Utilize an eLearning storyboard for lesson planning to ensure a well-rounded and transformative learning experience for optimal engagement and retention.

CHAPTER THREE

6. RESEARCH METHODOLOGY

Research is the process of discovering in a somewhat systematic manner information that was previously unknown (Walliman, 2011) and the methodology, as defined by Brown (2006) serves as the philosophical framework guiding the research process or the underlying foundation upon which the research is built.

The study aims to utilize Robotic Process Automation in the financial sector of Ernest & Young to cut costs and boost efficiency also focusing on manual processes in Accounts Payable, Receivable, and General Ledger, RPA aims to enhance smooth operations, reduce errors, expedite task completion and save on manual labor costs As per Harris (2022) article on Datagrafic and automation elevates employee productivity by freeing them from repetitive tasks fostering innovation and improving job satisfaction and he also added that the these advantages delivering time savings reduced errors and overall organizational success through efficient processes. Based on this EY could assist clients in seamless operations allowing employees to focus on more value-added tasks with the time saved and the ultimate goal is to make these processes independent of human intervention and enable on-demand automation for desired outcomes.

Similar Study published on the Uipath platform, UiPath Inc (n.d.) the case study on Fleet Innovation's adoption of UiPath's robotic process automation (RPA) technology has resulted in remarkable efficiency gains, with 45 per cent of monthly purchase invoices processed by robots that free employees to focus on more meaningful tasks and the positive impact on time utilization and workload management is evident, aligning with the company's growth plans and fostering a culture of efficiency. The enthusiastic embrace of automation by employees reflects its seamless integration into daily operations. The strategic partnership with Efima and UiPath, marked by openness and shared business understanding, has played a crucial role in Fleet Innovation's successful automation journey. Overall, this case study serves as a compelling example of how RPA can drive growth, enhance operational efficiency, and contribute to a culture of continuous improvement within an organization.

6.1. Research Philosophy and Approach

According to Kaushik et al, (2019), Pragmatic research philosophy prioritizes practicality and emphasizes real-world applications and flexibility in methodology to address practical challenges and derive useful insights and this study follows a pragmatic research philosophy by prioritizing practical insights in exploring the implementation of Robotic Process Automation at Ernst & Young's financial sector and it recognizes the importance of real-world experiences and perspectives of EY employees regarding RPA challenges and opportunities.

The methodology employed in this study adopts an inductive approach which is characterized by a process of reasoning that involves specific observations to derive general principles. Primary data-based research has been conducted by in-depth interviews with EY's financial team by embodying the inductive approach which is defined as a reasoning method that moves from specific instances to broader generalization (Thomas, 2006, pp.237–246). Inquiries were made about the extent of daily manual business processes and the potential time savings for clients

through automation and a qualitative study was conducted to address the research question: "How does the implementation of Robotic Process Automation contribute to the optimization of financial processes, particularly in Account Payable, Receivable, and General Ledger maintenance, by automating daily manual tasks and resulting in significant time savings in manual labor hours?"

According to the study by Gotthardt and others (2020, pp.90-102) the implementation of RPA encounters challenges such as complex task automation limitations, data quality concerns, and transparency needs, and overcoming these hurdles demands a holistic approach with a clear mindset and cross-departmental collaboration with strategic precision, Therefore the study also investigated the challenges encountered in building an RPA team within the department. Whereas, the chosen approach, tailored to a small and distinct sample size enables the collection of data related to motivations, perceptions, and values associated with the phenomenon or event because as suggested in the study by Eder (2013, pp.167-182), A small sample size like a 5-person interview is beneficial for studies aiming to demonstrate the existence of a new effect within a system, particularly in psychophysical investigations and it allows researchers to assert the presence of an effect in the majority of the population with confidence.

Another reason to move with this type of study is because the subject of RPA is complex and it is a complicated and ever-changing process in the real world conducting several interviews with experts is helpful because they can clearly explain why RPA is important with its advantages and the challenges it poses and this is better than using other methods for qualitative research (Gephart, 2004, pp.454–462).

Additionally, this research method is the most suitable for studying sensitive internal and confidential business information and to ensure reliable results, individual interviews are conducted, analyzed, and compared. Since this thesis explores financial processes within the EY finance sector a total of five employees from EY are interviewed with a specific focus on one level of the company, particularly the financial department.

Table 1 provides a brief overview of the respondents.

Table 2 Overview of the respondents.

Name	Designation	Interview Duration
Yugendra Balachandran	Finance Consultant, Ernst & Young	20 Minutes
Allwin Peter	Manager Business Consulting, Ernst & Young	30 Minutes
Sumeet Mittal	Senior Consultant, Ernst & Young	30 Minutes
Gaurav Singh	Consultant, Ernst & Young	30 Minutes
Harsh Mehta	Associate Consultant, Ernst & Young	30 Minutes

6.2. Research Time Horizon

I initiated contact with the respondents in December 2023 after formulating the interview questions. However, scheduling interviews during this period proved challenging as Ernst & Young (EY) like many organizations typically adheres to a standard fiscal year calendar concluding in December, and given the finance team's substantial year-end workload I encountered difficulties in securing interview slots until January. In five days, I successfully conducted all the interviews. The sessions included a comprehensive 50-minute interview with Yugendra Balachandran a finance consultant at Ernst & Young and a subsequent 40-minute interview with the remaining four team members following a hierarchical structure. The final interview lasting 60 minutes involved associates and consultants focusing on understanding the real challenges they face. This session aimed to uncover gaps between management and employees exploring reasons for limited time allocation for acquiring new skills. Issues such as lack of motivation training structure deficiencies and incomplete performance feedback due to company training models were addressed highlighting the complexities employees encounter in skill development.

This research is a one-time study and there are no plans for an extension over time. The entire research process took approximately two months encompassing the collection of primary data using the thematic analysis framework followed by data analysis. Before conducting the main analysis one month was dedicated to establishing models and frameworks. The findings were then derived based on these established models and frameworks and recommendations were provided.

6.3. Research Strategy with Technique.

According to Buckley and Chiang (1976), research methodology is a strategic design for problem-finding or problem-solving and the choice of methodology depends on the type and features of the research problem.

Table 3 Research Strategy

Research Philosophical Alignment	According to Saunders et al, (2009, pp.106-135), Research philosophical alignment ensures coherence, validity, and ethical consistency in the research process, guiding methodological choices and interpretation of findings and therefore, establishing a connection with the chosen pragmatic research philosophy and underscoring its relevance in accommodating real-world applications and the inherent flexibility required to dissect the practical challenges associated with RPA.
Participant Selection and Sampling Strategy	As per Campbell et al, (2020, pp-23-39), Purposive sampling involves selecting participants based on specific characteristics or criteria relevant to the research study's objectives, thus a careful selection process identifies specific individuals from EY's financial sector to participate in the study. The decision was to have a small but diverse group to obtain detailed insights and a better understanding of the subject. The selected member is listed in the above table 1.

Development of a semi-structured interview guide:	Outlined the methodical development of a semi-structured interview guide, integrating predefined questions to specifically target quantitative aspects of RPA impact in accordance with the study by Kallio et al, (2016, pp.2954–2965) which benefits research by creating a well-thought-out guide for interviews helps make the research more reliable and trustworthy, improving the quality of the study results.
Ethical considerations	Resnik (2020) states that ethical considerations are crucial in research to ensure the well-being, rights, and confidentiality of participants are respected, maintaining trust and integrity in the research process therefore this report discussed ethical aspects, including securing permission, keeping information private, and handling sensitive details responsibly in thorough interviews.
Trust Establishment	Emphasized the vital role of building rapport and trust with participants by explaining the methods used to foster an environment for open and honest sharing of experiences is important and this aligned with the study Wilkins (2008) says that effective engagement requires trust, emphasizing the importance of reliability, honesty, and mutual respect. Kennedy (2020) added that the lack of trust undermines effective engagement and leads to communication barriers diminished collaboration and the inability to cultivate meaningful connections.
Thematic Analysis Framework	Chosen a thematic analysis framework for understanding the interview data, focusing on finding patterns, recurring themes, and different perspectives because Thematic analysis is a qualitative data analysis method commonly applied to textual sets like interviews or transcripts, involves a six-step process: familiarization, coding, generating themes, reviewing themes, defining and naming themes, and writing up (Caulfield, 2022).

As articulated by Nadarajah et al. (2014, pp.522–531), a comprehensive comprehension of business processes is crucial for initiating any alterations in process execution and formulating advanced solutions. Consequently, an in-depth exploration of the business process was conducted during these interviews and this aimed to identify the challenges encountered by the team in automating their manual processes, and the essential issues were deduced by synthesizing feedback gathered through interview questions.

The interview responses were detailed and varied in perspective since the interviews were conducted with individuals of different designations. Associates faced certain issues, while senior managers encountered different challenges. By sampling these unstructured problems, 20 key points were generated, encompassing the problems of each employee. Subsequently, these 20 points were analyzed to derive five main findings addressing all the identified issues. Based on these problems, frameworks and models were discussed to facilitate a seamless RPA transition in the account.

This research employed a dual data set categorization strategy that focuses on issues confronted by associates and consultants engaged in real-time manual processes during the adoption of RPA and challenges encountered by higher management in establishing a small agile RPA team and providing employee training. The associates' hesitancy to openly discuss problems with management hinted at a potential communication gap. To substantiate this observation the study drew on the work of Adler et al. (2015), emphasizing the importance of effective communication in organizational settings.

Consequently, a dedicated interview with consultants was conducted to gain insights into their experiences and challenges, further informed by the communication accommodation theory (Giles & Coupland, 1991). On the managerial side the reluctance to embrace RPA as a formidable task aligned with the findings of Davenport (2018) and Robey et al. (2013), highlighting the challenges organizations face in integrating emerging technologies and also the study's comprehensive approach involved integrating primary data collected over two months by utilizing the thematic analysis framework and subsequently establishing models and frameworks over a month that align with best practices in qualitative research (Creswell & Poth, 2018). The research duration adhered to a one-time study with a meticulous timeline and ensured a thorough investigation without extending over time also the strategic approach included a 3rd separate interview with consultants, emphasizing the importance of triangulation in qualitative research (Denzin, 1978) and providing a holistic view of the challenges faced at different organizational levels.

CHAPTER FOUR

7. FINDING

Ernst & Young (EY) is a major global professional services network that is ranked among the Big Four accounting firms. In EY's finance operations the manual processes especially in accounts payable, Receivables, and General Ledger maintenance are prevalent, and considering comprehending those manual processes through the interviews, they are:

Account Payable	Documenting invoices Tracking payments Reconciling payment entries with expenses Handling credit notes.
Account Receivables	Aligning cash payments with customer records.
General Ledger	Concluding and finalizing journals at month-end Adjusting ledger Reclassifying financial transaction Issuing monthly and annual financial statements.

Automating repetitive tasks in finance allows the team to focus on value-added activities like analysis and forecasting and this not only aids strategic decision-making but also saves time for clients and boosts efficiency,

providing greater value. The study uses thematic analysis to understand interview data, identifying patterns and recurring themes in a six-step process (Caulfield, 2022).

Step 1: Familiarisation: In the first step of the Thematic Analysis framework, interview data is explored to establish familiarity with qualitative data, including interviews and transcripts, and a consolidated transcript from all three interview sessions is created for thematic analysis. (Javadi, 2016, pp.34-40).

Comprehended perspectives from finance consultants, associate consultants, and management are categorized into two viewpoints: consultant and management. This aims to bridge the gap and provide solutions for the seamless integration of Robotic Process Automation, leading to time savings for EY and its clients by enhancing overall performance. (Javadi, 2016, pp.34-40).

Step 2: Coding: Moving forward, the next step involves coding the data and coding entails the identification and highlighting of specific sections within our text, typically phrases or sentences. Afterward we assign short and simple labels which are known as 'codes' to describe the content of these identified sections (Javadi, 2016, pp.34-40).

Table 4 Thematic Analysis Codes

Interview Extracts (summarized)	Codes
Regarding data processing within the organization currently, 70 percent of resources are dedicated to manual tasks, causing significant inefficiency. This not only wastes time but also hinders the workforce's ability to focus on critical aspects such as productivity enhancement, value-added tasks, budgeting, forecasting, and financial analysis. The financial closing process takes a lengthy 7 days, with the team generating a balance sheet for management. Introducing Robotic Process Automation (RPA) could reduce this period to just 2 days, allowing more time for in-depth analysis.	MP_INEFFICIENCY: Manual processing inefficiency: 70 per cent spend on manual tasks leading to time wastage. TASK_FOCUS_IMPEDIMENT: Impediment in focusing on productivity, value-added tasks, budgeting, forecasting, and financial analysis. FIN_PROCESS_DELAY: Financial processing delays: 7 days for closing, the potential to reduce to 2 days with RPA. COMMUNICATION_ISSUE: Lack of communication from management causing backlog, reduced morale, and increased workload. SKILLS_OVER_TRAINING: Preference for hiring skills over providing training, impacting future investment in employee development. EMPLOYEE_UNHAPPINESS: Employee unhappiness due to lack of support, fear of job loss, and difficulty in learning new technologies. INCENTIVIZE_LEARNING: Need for incentivizing learning to overcome challenges in adapting to new technologies. POOR_MGMT_COMMUNICATION: Lack of effective management communication leading to confusion among employees.

A lack of communication from management has led to a backlog of routine work diminishing morale and forcing employees to work overtime, including training sessions. The company's tendency to hire skilled individuals rather than invest in training hampers future advancements. The current technology-focused approach lacks emphasis on human considerations, necessitating effective change management for seamless integration. Employee unhappiness persists due to a lack of support in testing and training, compounded by fears of job loss post-implementation. Addressing these issues requires incentivizing learning, improving communication from management, and strategically focusing on both technological and human aspects for effective solutions. There is also a perceived risk in automating daily operational processes, and agreement on this lacks an agile team setup for RPA.	DELAYED_CURRENT_WORK: Current work lagging due to implementation issues, requiring strategic solutions. CHANGE_MANAGEMENT_IMPORTANCE: Emphasis on the importance of change management for the successful integration of new technologies. PRODUCTIVITY_DECREASE: Decrease in overall productivity due to manual processes and communication gaps. BACKLOG_EFFECT: Backlog effect on usual work, resulting in employees working extra time. FEAR_OF_JOB_LOSS: Fear among employees of losing their jobs post-implementation of new technologies. CONFUSION_DUE_TO_LACK: Confusion among employees due to lack of clear communication from management. SYSTEM_OVER_EMPLOYEE_FOCUS: Excessive focus on technology systems without considering the well-being of employees. STRATEGIC_SOLUTIONS_REQUIRED: Requirement for strategic solutions to address current work delays and implementation issues. MORALE_REDUCTION: Reduction in employee morale due to the prolonged manual processing and communication issues. EFFICIENT_RPA_UTILIZATION: Emphasizing the potential for efficient utilization of RPA to streamline financial processes and allow for more analysis time. RISK_IN_AUTOMATION Automating the processes linked to daily operations poses a risk of daily operation delays. BUILD_AGILE_TEAM There is a need to establish an agile RPA team due to its small size which makes it easier to build.

Step 3: Generating themes.

After creating codes, we review them to find common patterns and begin forming themes. Themes are usually broader concepts than individual codes, often involving the combination of several codes into a single theme. In our example, we may group codes together to create overarching themes (Javadi, 2016, pp.34-40

Manual Processing Inefficiency (Theme: Operational Inefficiencies) Codes: MP_INEFFICIENCY, TASK_FOCUS_IMPEDIMENT
Financial Processing Challenges (Theme: Financial Process Optimization) Codes: FIN_PROCESS_DELAY
Communication and Management (Theme: Communication and Management Gap) Codes: COMMUNICATION_ISSUE, POOR_MGMT_COMMUNICATION
Employee Development (Theme: Skills Development and Training) Codes: SKILLS_OVER_TRAINING, INCENTIVIZE_LEARNING
Employee Well-being and Satisfaction (Theme: Employee Well-being) Codes: EMPLOYEE_UNHAPPINESS, FEAR_OF_JOB_LOSS, MORALE_REDUCTION
Efficiency and Strategic Solutions (Theme: Efficiency and Strategic Solutions) Codes: DELAYED_CURRENT_WORK, CHANGE_MANAGEMENT_IMPORTANCE, STRATEGIC_SOLUTIONS_REQUIRED
Risk in Automation (Theme: Daily Operation Disruptions) Codes: RISK_IN_AUTOMATION
Building Agile Team (Theme: Establishing Efficiency in RPA Team Structure) Codes: BUILD_AGILE_TEAM

Step 4: Reviewing Themes.

Now, we ensure themes accurately represent the data by checking against the dataset. If issues arise, we modify, combine, discard, or create new themes for enhanced usefulness and accuracy.

To address the Communication and Management Gap we can eliminate them within the identified themes because the Efficiency and Strategic Solutions theme encompasses change management with communication being a crucial element. Additionally, we introduce two more themes to address concerns related to the risks associated with automation and the essential task of building an agile team to effectively manage and develop automated solutions. They are :

Risk in Automation (Theme: Daily Operation Disruptions) Codes: RISK_IN_AUTOMATION
Building Agile Team (Theme: Establishing Efficiency in RPA Team Structure) Codes: BUILD_AGILE_TEAM

Step 5: Defining and naming themes.

Table 5 Thematic Analysis Themes

| Name	Definition
Operational Inefficiencies Theme	Highlighting inefficiencies in manual processing and challenges in focusing on critical tasks.
Financial Process Optimization Theme	Addressing challenges in financial processes and emphasizing the optimization potential with RPA.
Skills Development and Training Theme	Emphasizing the importance of employee development through skills enhancement and incentivized learning.
Employee Well-being Theme	Focusing on factors affecting employee well-being, including unhappiness, fear of job loss, and reduced morale.
Efficiency and Strategic Solutions Theme	Addressing issues related to delayed work, change management importance, and the need for strategic solutions.
Risk in Automation Theme	Highlighting the potential risks associated with automating daily operational processes.
Building Agile Team Theme	Emphasizing the need to establish an agile RPA team for efficient development and management.

Step 6: Writing Analysis

This marks the final stage of the thematic analysis framework and the analysis derived from the findings is presented below.

8. ANALYSIS/DISCUSSION

Recognizing manual inefficiencies is crucial for companies because it impacts overall productivity as per Brynjolfsson and McAfee's 2014 study and addressing these issues and leveraging RPA for financial process optimization based on Deloitte's (2022) report by Polner et al. it is vital for improved efficiency and speed. The research question, " How does Robotic Process Automation enhance efficiency in financial processes, particularly in Accounts Payable, Receivable, and General Ledger maintenance which helps its client to save cost and improve efficiency?." has addressed that the operational inefficiencies often arise from manual processes and errors and the Six Sigma methodology with its DMAIC (Define, Measure, Analyze, Improve, Control) approach, is a data-driven model that can significantly contribute to identifying and reducing defects in processes as discussed in the literature review. During the Define phase EY places a strong emphasis on gaining a clear understanding of the problem, particularly addressing inefficiencies in manual processing. Measurement involves quantifying the current state while Analysis delves into comprehending the root causes of these inefficiencies. The Improve phase provides an opportunity for EY to implement changes and Control is instrumental in ensuring that improvements are sustained over time. Recognizing financial processes as critical components of business operations, EY

emphasizes the importance of optimizing them for overall efficiency. The rigorous methodology of Six Sigma ensures a systematic approach to identifying and eliminating defects in financial processes. Additionally, the integration of the UiPath Operating Model which emphasizes the four stages of proving, establishing, expanding, and scaling RPA efforts discussed more in the literature review provides a holistic framework for financial process optimization. This model aligns to achieve a 30 per cent to 200 per cent increase in ROI within the first year, as reported by McKinsey Digital, and potential labor cost savings of 25 per cent to 40 per cent through RPA solutions.

EY has EY Skills Foundry which is an innovative upskilling platform that offers tailored learning experiences and addresses skills gaps through AI-driven solutions among the top 25 Work Tech vendors it supports organizations in workforce transformation and HR evolution that ensures a future-ready workforce (EY, 2023), but even EY emphasizes advanced skill development and management support despite training focus employee motivation is lacking often completing it after hours affecting focus. Pillans and Dalton (2020) stress training for competitiveness aligning with Kuoppala (2019, pp. 904–915) on well-being's impact on success.
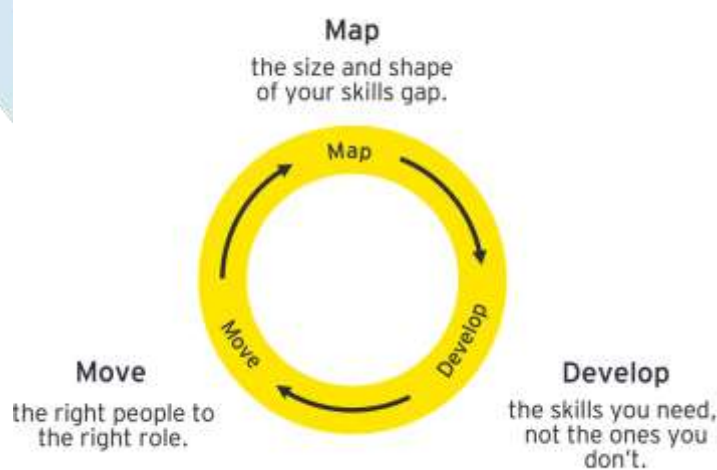
Figure 8 EY Skills Foundry Cycle (EY, 2023)

In EY Skills Foundry, businesses can map existing skills, identify gaps, and assess upskilling opportunities, strategically move talent to fill role gaps, and develop workforce capabilities through targeted learning content, ensuring adaptability and readiness for organizational growth (EY, 2023).

The analysis of the question "How is Ernst & Young's finance team working on their advanced skill development and what level of support are they receiving from the management?" has led to the suggestion of implementation of a 70:20:10 model which is inspired by the 70 20 10 Institute's (2017) case study on "Increasing Sale Performance and Retention,".

Figure 9 Example of learning by working 70-20-10 (Jos, 2018)

EY benefits in its Skills Development and Training theme by adopting a holistic learning approach as per Lombardo and Eichinger (1996), the model allocates 70 per cent of learning to on-the-job experiences which emphasizes practical skill development and aligning with EY's organizational growth goals. The 20 per cent dedicated to social learning fosters collaboration that enhances communication and knowledge sharing among EY staff as noted by Bingham and Conner (2015) and the remaining 10 per cent in formal training supported by Dobbs and Clark (2008) were EY employees can allocate 10 per cent of their working hours to focus on skill development ensures a structured foundation. EY can leverage engaging elements following the principles of multimedia learning (Mayer, 2009) to enhance employee engagement and knowledge retention, contributing to the firm's success in skills development. Addressing the question of employees lacking time for personal training after working hours, the 70:30:10 approach offers incentives such as money or shopping vouchers after completing training, as suggested by Prasad et al. (2013) and this approach aims to motivate employees and enhance their engagement in skill development activities while providing valuable insights into the team's skill development efforts and the level of support received from management. The worry regarding job security diminishes as employees engaged in manual processes start acquiring new skills through learning and actively participate in the automation journey. This, in turn, not only boosts their morale but also enhances their skills, ultimately contributing to the improvement of the company's value.

Pertheban et al. (2023) stress proactive measures for organizational resilience by addressing challenges like delayed work, change management, and strategic solutions. Additionally, Hillson (2003, pp.85-97) underscores the importance of understanding and managing risks in technological implementations to prevent disruptions and ensure long-term success. Discussing the question "Does Ernst & Young's finance team face the risk of operational delays and inefficiencies if automation is initiated in their current operations?", the research findings indicate that EY management perceives risks in automating daily operations because if daily operations are automated then the employees should be equipped to address any potential defect issues to maintain operational

efficiency. Additionally, the management is concerned that if clients face issues with the results of automation, it may be attributed to the inefficiency of the robot.

To address this challenge EY can significantly benefit from the Agile Risk Management Framework in the context of automation, specifically addressing the Risk in Automation Theme. As the organization increasingly adopts automated processes this framework provides a systematic approach to anticipate, evaluate, and manage risks in IT projects. Automation poses challenges such as intricate integrations, employee reluctance, and substantial initial costs and the Agile Risk Management Framework becomes instrumental in prioritizing risks by making informed decisions and ensuring the resilience of automation projects by leveraging this structured risk management approach, EY can enhance its ability to navigate the complexities associated with automation leading to more successful and secure implementations. Research by Kalluri (2022, pp.38–44) explores human factors affecting risk management in complex Agile Scrum projects within large enterprises highlighting essential risk factors such as job insecurity, resource allocations, and communication issues and the impact of organizational culture on Agile practices also emphasized all of which can be effectively managed through the application of the Agile Risk Management Framework.

Figure 10 Global Enterprise Risk Management Market (Data Bridge Market Research, 2021)

The study by Data Bridge Market Research (2021), delves into the pivotal role of enterprise risk management (ERM) amid the swift digitization of the finance sector that highlights its contributions to improving customer experience, reducing costs, and addressing evolving risk management requirements and the market was initially assessed at USD 4328.00 million in 2021, is anticipated to achieve USD 6591.92 million by 2029 that indicate a growth rate of 5.4 per cent. Once the EY finance team focuses on implementing the Agile Risk Management Framework, all the issues associated with automation identified in the findings will automatically be resolved.

To analysis of the findings of the question "How does EY's finance department manage RPA specifically in terms of having a small in-house team versus relying on the central RPA team or Center of Excellence? reveal that the EY has a CoE central team of Intelligent Automation, and this team is responsible for automating processes across all departments. However, due to the extensive work and time required to make them understand the business

processes' complexity it is challenging to push toward the automation solution within their department. Therefore, The suggested approach advises training the finance team to set up infrastructure and tools by dedicating time to start automation work alongside operational tasks and also highlights employee readiness but managerial clarity lacks which suggests the Agile team-building framework to address this. Transforming the finance team with the Scrum framework is vital for efficiency and adaptability in the financial process ensuring swift adaptation to changing needs and industry shifts through iterative and collaborative methods.

The Naydis paper (2020, pp.15-24) categorizes project management approaches into classical and flexible methods, highlighting that Agile particularly Scrum enhances adaptability and reduces gaps between organizations and clients. Therrien's research (2008) indicates that agile teams lead to quicker adaptation, faster value delivery, and higher customer satisfaction. Establishing an agile RPA team is crucial for efficient development and management, maximizing automation benefits. If EY implements RPA, employees could save 70-80 per cent of their time, redirecting it to more productive tasks, enhancing operational efficiency, and contributing strategically to the company's success.

At last, after all four research questions have been addressed one last analysis from all the findings also indicates the need for well-structured change management within the team to facilitate the adoption of new changes. To enhance the RPA, journey the EY can apply Lewin's Change Management Model and this model aids in addressing challenges such as delayed work, change management, and communication gaps that offer a systematic approach through the Unfreeze, Change, and Refreeze stages. A case study by Kobiruzzaman illustrates how Netflix embraced Lewin's model by transitioning from a pay-per-rental model to a subscription system in 1999 and introducing online streaming in 2007 ongoing adaptations such as mobile apps and "Skip Intro," reflects Netflix's commitment to evolving with market changes and user preferences.

The EY finance team first initiated the change by creating awareness among the finance team about the benefits and necessity of implementing RPA to enhance efficiency and accuracy in their manual processes. This can be achieved through workshops, training sessions, and clear communication about the positive impact of the change. Secondly, facilitate the change by providing the necessary resources, tools, and support for the finance team to adapt to the new RPA systems seamlessly which involves offering hands-on training, mentorship, and a supportive environment to encourage the adoption of automated processes.

Lastly, institutionalize the change by integrating RPA into the finance department's standard operating procedures and creating a culture that embraces continuous improvement through automation which involves regular evaluations, feedback loops, and a commitment to ongoing learning to ensure that the benefits of RPA are sustained over time and by following Lewin's model the EY can effectively implement and embed RPA automation in their finance department that leads to streamlined operations and improved financial processes.

CHAPTER FIVE

9. CONCLUSION

To sum up, this study uncovered the difficulties Ernst & Young (EY) encounters in its finance operations, especially in handling accounts payable, receivables, and general ledger tasks. The manual methods used in these areas cause problems like inefficiencies, making work less productive and affecting important decision-making. The analysis of interviews showed various important themes, such as issues in operations, improving financial processes, gaps in communication and management, developing skills and training, employee satisfaction, efficiency and solutions, risks in using automation, and creating an agile team.

The study systematically tackled the first research questions beginning with understanding the impact of robotic process automation (RPA) on efficiency in financial processes and the findings highlighted the importance of recognizing manual inefficiencies, leveraging RPA for financial process optimization, and adopting methodologies like Six Sigma for systematic improvements and the study also emphasized the potential benefits of integrating the UiPath Operating Model to achieve increased ROI and labor cost savings.

The second research question delved into how EY's finance team is working on advanced skill development and the support received from management. The suggestion involves implementing a 70:20:10 model for learning and development, inspired by the 70 20 10 Institute's case study. This model aims to address the need for a holistic approach to skill enhancement. The EY Skills Foundry, an upskilling platform, can be further optimized to align with this model, fostering a future-ready workforce.

The third research question explored the risks associated with the initiation of automation in EY's current operations. The Agile Risk Management Framework was proposed as a systematic approach to anticipate, evaluate, and manage risks in automation projects, and leveraging this framework can help EY navigate complexities associated with automation, ensuring successful and secure implementations.

The final research question investigated how EY's finance department manages RPA, specifically in terms of a small in-house team versus relying on a central RPA team or Center of Excellence and the findings suggested the establishment of an agile RPA team by adopting the Scrum framework for efficiency and adaptability in financial processes and the transformation of the finance team with this approach could lead to significant time savings and operational efficiency.

In addition to addressing the research questions, a comprehensive analysis recommended the application of Lewin's Change Management Model to facilitate the adoption of new changes, particularly in the context of implementing RPA. The model's Unfreeze, Change, and Refreeze stages were identified as crucial steps in creating awareness, facilitating change, and institutionalizing RPA within the finance department.

Overall, this study provides valuable insights and practical recommendations for EY to enhance its finance operations through the adoption of RPA, skills development, risk management, agile team structures, and effective change management. By implementing these suggestions, EY can streamline its financial processes, improve efficiency, and position itself for long-term success in the dynamic professional services landscape.

Successfully establishing the RPA team and initiating the automation journey within the team through employee training can lead to substantial benefits like allowing each employee to automate 70-75 per cent of their departmental manual work and this not only enhances internal operational efficiency but also significantly contributes to client satisfaction. Automation enhances service delivery, accuracy, and productivity, positioning the company as technologically advanced for mutual benefits with clients.

10. RECOMMENDATION

Creating a focused RPA team following the Agile methodology and using the Scrum framework is essential for efficient and adaptable financial processes. Starting the automation journey involves thorough employee training programs to ensure successful integration and a strategic goal is to automate 70-75 per cent of departmental manual work that enhances internal operational efficiency and significantly contributes to client satisfaction. EY integrates the 70:20:10 model for learning and development prioritizing practical experiences, social learning, and formal training (Cloke, 2022). The EY Skills Foundry platform aligns seamlessly with this model by offering tailored learning experiences and addressing skills gaps particularly in providing Scrum Master and UiPath training to employees EY (2023). Additionally, EY encourages employees to explore and utilize the free learning resources on the UiPath Academy for UiPath tool training and the emphasis on free UiPath tool learning underscores EY's commitment to accessible and valuable learning opportunities UiPath Inc (2018). Upper management plays a crucial role by encouraging managers to learn the Scrum framework and actively supporting its implementation within their teams, fostering a culture of continuous learning and skill development at EY.

To establish an agile team at EY adept at managing risks in automation projects, it's crucial to foster an agile mindset among team members and by providing comprehensive training on the Agile Risk Management Framework will define roles clearly and implement agile methodologies like Scrum or Kanban. Form cross-functional teams break down automation projects into iterative cycles and prioritize risks systematically. Conduct regular risk assessments allocate resources and time for robust risk management and cultivate a culture of continuous improvement by emphasizing open communication and collaboration to keep everyone informed about project progress and challenges. This approach ensures EY builds a dynamic and responsive team capable of navigating the complexities of automation projects while effectively managing risks (DROZD, 2023).

To build an internal Agile team at EY for RPA, the adoption of Lewin's Change Management Model is pivotal. Initiating the Unfreeze stage involves creating awareness within the finance team about the benefits and necessity of RPA and this includes highlighting the positive impact on efficiency and productivity by providing the team with necessary resources, tools, and support to facilitate a smoother transition during the Change stage by ensuring they are well-equipped for the shift. Through targeted training on the Agile framework and UiPath tool, the team gains essential skills to embrace the Agile approach to RPA implementation and to address communication gaps by emphasizing open channels and collaborative platforms. Motivating continuous learning can be achieved by showcasing success stories setting achievable milestones, and fostering a culture that values ongoing development. Finally, during the Refreeze stage, reinforce the new practices and encourage the team to

apply their newfound knowledge by solidifying the transition and ensuring the sustained success of the RPA Agile team at EY (Hussain et al, 2018, pp.123-127).

In order to improve inefficiency in their current manual processes the EY systematically implements Six Sigma DMAIC methodologies to optimize the automation. They start by clearly defining project goals and scope, followed by measuring current inefficiencies to establish a baseline and in the analysis phase the statistical tools are employed to identify root causes of inefficiencies and EY then implements targeted improvements in the form of advanced automation technologies and optimized workflows during the Improve phase. The Control phase ensures sustainability by setting up monitoring mechanisms, key performance indicators (KPIs), and regular audits. Throughout this process the EY fosters collaboration among cross-functional teams to align solutions with overall business objectives which will result in the systematic identification and elimination of inefficiencies in finance process automation (Gaikwad et al, 2017, pp.229-238).

It's also important for EY to ensure effective Monitoring and Evaluation (M&E) by establishing a robust mechanism to track the progress of each recommendation this involves conducting regular assessments to evaluate the effectiveness of implemented changes and EY utilizes a comprehensive set of performance metrics and gathers feedback to gauge the impact of the implemented measures. The M&E process is dynamic and allows for adjustments based on real-time information and insights gained from ongoing assessments and this continuous feedback loop is instrumental in identifying areas of improvement and ensuring that the organization remains adaptable to changing circumstances. By prioritizing regular evaluations and adjustments the EY maintains a proactive approach to enhancing processes and achieving sustained success (curry, 2018, pp-147-150).

Creating a timetable with approximate costs for the outlined initiatives involves a dynamic and phased approach:

Table 6 EY Agile Transformation Initiatives Timetable and Costs.

Initiative	Duration	Approximate Cost
Focused RPA Team Adoption		
- Employee Training Programs	3 months	$50,000
- Automation Journey Kick-off	1 month	No additional cost
- Strategic Goal Achievement	Ongoing	No additional cost
Learning and Development with 70:20:10 Model		
- EY Skills Foundry Platform Integration	2 months	$30,000
- Scrum Master and UiPath Training	4 months	$80,000

- Utilizing UiPath Academy	Ongoing	No additional cost
Upper Management Involvement		
- Scrum Framework Training for Managers	2 months	$40,000
- Continuous Learning Culture Implementation	Ongoing	No additional cost
Agile Risk Management Framework Implementation		
- Comprehensive Training	3 months	$50,000
- Cross-Functional Team Formation	1 month	No additional cost
- Iterative Project Breakdown and Risk Prioritization	Ongoing	No additional cost
Lewin's Change Management Model Adoption		
- Unfreeze Stage (Awareness and Resources)	2 months	$30,000
- Change Stage (Training and Implementation)	4 months	$70,000
- Refreeze Stage (Reinforcement and Application)	Ongoing	No additional cost
Six Sigma DMAIC Methodologies Implementation		
- Define and Measure Phases	3 months	$60,000
- Analyze and Improve Phases	4 months	$80,000
- Control Phase	Ongoing	No additional cost
Monitoring and Evaluation Framework		
- Mechanism Establishment	2 months	$30,000
- Regular Assessments and Adjustments	Ongoing	No additional cost

This timetable provides a structured and cost-effective plan for EY's initiatives, emphasizing a balance between financial investment and leveraging existing resources for continuous improvement and sustained success. Costs are approximations and may vary based on specific organizational needs and market conditions.

REFLECTIVE STATEMENT

Kolb's Experiential Learning Model has four stages: engage in a new experience, reflect on it, make sense of it by developing theories, and then apply these concepts in practical settings. It's a continuous cycle starting with a new experience and leading to another (Bhattarai, 2020).

Concrete Experience: The adventure began with the ambitious aim of utilizing RPA to enhance efficiency and cut costs in financial processes at EY. The practical application of RPA in areas like Accounts Payable, Receivable, and General Ledger maintenance was our focal point. Inspired by success stories from companies like Fleet Innovation and UiPath the expectations were high envisioning seamless operations and significant time savings. During the research I engaged in in-depth interviews with members of EY's financial team. This hands-on experience allowed me to grasp the refinement of their daily manual processes understand the challenges faced and uncover the potential time savings through automation. However as Gotthardt and others (2020, pp.90-102) highlighted the journey was not without hurdles such as complex task automation limitations and transparency needs.

Reflective Observation: The pragmatic research philosophy adopted in this study prioritizes practical insights aligned with the real-world challenges faced by EY. The inductive approach moving from specific instances to broader generalizations resonated with the complexity of RPA in the financial sector. Conducting a small sample size of interviews proved beneficial enabling a deeper exploration of motivations perceptions and values associated with RPA. One notable observation was the dynamic nature of RPA in the real world. The complex and ever-changing landscape required a focused approach and interviews with experts emerged as the most suitable method for qualitative research. The intimate setting allowed experts to articulate the significant advantages and challenges of RPA surpassing the efficacy of other research methods.

Abstract Conceptualization: The findings unveiled critical themes such as operational inefficiencies, financial process optimization, communication and management gaps, skills development and training, employee well-being, efficiency, strategic solutions, and risks associated with automation. As Kaushik et al. (2019) emphasized, the study's pragmatic approach successfully addressed the real-world experiences and perspectives of EY employees. The identified themes led to a comprehensive understanding of the challenges and opportunities inherent in implementing RPA. The 70:20:10 model proposed for skills development resonated strongly, offering a holistic learning approach that aligns with EY's growth goals. The Agile Risk Management Framework emerged as a strategic solution to navigate the complexities associated with automation.

Active Experimentation: As the research moved forward, my role went beyond just being a regular student researcher. I started tossing around ideas based on the themes we found. Suggesting to create a quick and

adaptable RPA team using the Scrum framework and pushing for using Lewin's Change Management Model to make new things happen marked a shift from just watching to being part of the action. The hands-on phase was all about imagining how these ideas could really work at EY. The idea of having a flexible RPA team, saving a bunch of time, and making things run better got me pretty pumped. Using Lewin's Change Management Model looked like a good plan for smoothly fitting RPA into the finance department.

Looking back at my journey with the Kolb Reflective Model I can see how I went from a curious student researcher to someone who's actively pitching in at EY. Checking out RPA wasn't just about learning more but it also gave me the confidence to suggest smart solutions. This whole learning adventure showed me how theories and real-world stuff mix and match making me really appreciate the hands-on side of research and putting ideas into action.

REFERENCES

1. Adler, R. B., Rosenfeld, L. B., & Proctor, R. F. (2015) *Interplay: The Process of Interpersonal Communication*. Oxford University Press.

2. Bhattarai, A. (2020) Action Research: A Reflective Cycle. *Journal of NELTA*, 10(1).

3. Bingham, T., & Conner, M. (2015) *The New Social Learning: A Guide to Transforming Organizations Through Social Media.* Berrett-Koehler Publishers.

4. Boote, D.N. and Beile, P. (2005) Scholars before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation. Educational Researcher, 34(6), 3–15. Availabe from: https://www.jstor.org/stable/3699805.

5. Brynjolfsson, E., & McAfee, A. (2014) *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies.* W. W. Norton & Company.

6. Buckley, J.W., Buckley, M.H., and Hung-Fu Chiang. (1976) Research Methodology & Business Decisions. *National Association Of Accountants and Society Of Industrial Accountants Of Canada.* Canada: National Association Of Accountants.

7. Campbell, S., Campbell-Phillips, S. and Phillips, D. (2020) Lack of Communication between Management and Employees. *SIASAT*, [online] 5(3), 32–39. doi:https://doi.org/10.33258/siasat.v5i3.67.

8. Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D. and Walker, K. (2020) Purposive Sampling: Complex or Simple? Research Case Examples. *Journal of Research in Nursing*, 25(8), 652–661. doi:https://doi.org/10.1177/1744987120927206.

9. Carmichael, M. (2023) Making Risk Management for Agile Projects Effective. *ISACA*. Availabe from: https://www.isaca.org/resources/news-and-trends/isaca-now-blog/2023/making-risk-management-for-agile-projects-effective#:~:text=As%20shown%20in%20Figure%202.

10. Catalli, S. (2020) Create And Empower Every Employee To Be An Automation Hero | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/product-and-updates/upcoming-uipath-2020-fts-release [Accessed 29 December 2023].

11. Catalli, S. (2020a) Automation Operating Model Benefits - Part 1 | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/automation/automation-operating-model-part-one [Accessed 25 December 2023].

12. Catalli, S. (2020b) Automation Operating Model Part 2 - Building The Team | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/automation/automation-operating-model-part-two [Accessed 28 December 2023].

13. Catalli, S. (2020c) Create And Empower Every Employee To Be An Automation Hero | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/product-and-updates/upcoming-uipath-2020-fts-release [Accessed 30 December 2024].

14. Caulfield, J. (2022) How to Do Thematic Analysis | Guide & Examples. *Scribbr*. Availabe from: https://scribbr.co.uk/research-methods/thematic-analysis-explained/.

15. Chui, M., Manyika, J. and Miremadi, M. (2016) Where machines could replace humans--and where they can't (yet) | McKinsey. *www.mckinsey.com*. Available from: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/where-machines-could-replace-humans-and-where-they-cant-yet.

16. Chui, M., Manyika, J. and Miremadi, M. (2016) Where machines could replace humans--and where they can't (yet) | McKinsey. *www.mckinsey.com*. Availabe from: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/where-machines-could-replace-humans-and-where-they-cant-yet.

17. Clark, R. C. (2008) *Building expertise: Cognitive methods for training and performance improvement* (3rd ed.). Pfeiffer/John Wiley & Sons.

18. Cloke, H. (2022) What is the 70 20 10 Model & How to Apply It for Learning & Development. *Growth Engineering*. Availabe from: https://www.growthengineering.co.uk/70-20-10-model/#:~:text=In%20fact%2C%20it%20states%20that [Accessed 4 January 2024].

19. Creswell, J. W., & Poth, C. N. (2018) *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Sage Publications.

20. Curry, D.W. (2018) Perspectives on Monitoring and Evaluation. American Journal of Evaluation, 40(1), 147–150. doi:https://doi.org/10.1177/1098214018775845.

21. D. (2020) What Is Ethics in Research & Why Is It Important?. *National Institute of Environmental Health Sciences*. Availabe from: https://www.niehs.nih.gov/research/resources/bioethics/whatis#:~:text=Second%2C%20since%20research%20often%20involves.

22. Data Bridge Market Research (2021) Enterprise Risk Management Market Demand, Key Players, Opportunities, & Forecast Analysis By 2029. *www.databridgemarketresearch.com*. Availabe from: https://www.databridgemarketresearch.com/reports/global-enterprise-risk-management-market.

23. Davenport, T. H. (2018) *The AI Advantage: How to Put the Artificial Intelligence Revolution to Work.* The MIT Press.

24. Deloitte (2018) 2019 Deloitte Global Human Capital Trends. *Deloitte United Kingdom.* Availabe from: https://www2.deloitte.com/uk/en/pages/human-capital/articles/introduction-human-capital-trends.html.

25. Denzin, N. K. (1978) *Sociological Methods: A Sourcebook*. Routledge.

26. DROZD, K. (2023) Cultivating an agile mindset. *Atlassian*. Availabe from: https://www.atlassian.com/agile/advantage/agile-mindset.

27. Eder, M. (2013) Does size matter? Authorship attribution, small samples, big problem. *Digital Scholarship in the Humanities,* 30(2), 167–182. doi:https://doi.org/10.1093/llc/fqt066.

28. Ernst & Young (2023) About us – Who we are | EY - Global. *www.ey.com*. Available from: https://www.ey.com/en_uk/about-us.

29. EY (2023) EY Skills FoundryTM: workforce upskilling and reskilling platform. *www.ey.com*. Availabe from: https://www.ey.com/en_uk/workforce/skills-foundry-workforce-upskilling-reskilling-platform [Accessed 20 January. 2024].

30. Fernandez, D. and Aman, A. (2018) Impacts of Robotic Process Automation on Global Accounting Services. *Asian Journal of Accounting and Governance*, 9, 123–132. doi:https://doi.org/10.17576/ajag-2018-09-11.

31. Gaikwad, L.M., Sunnapwar, V.K., Teli, S.N. and Parab, A.B. (2017) Application of DMAIC and SPC to Improve Operational Performance of Manufacturing Industry: *A Case Study. Journal of The Institution of Engineers (India): Series C*, 100(1), 229–238. doi:https://doi.org/10.1007/s40032-017-0395-5.

32. Gartner (2023) Considerations for Implementing Robotic Process Automation. 1–19. Availabe from: https://emtemp.gcom.cloud/ngw/globalassets/en/doc/documents/considerations-for-implementing-robotic-process-automation.pdf [Accessed 24 December 2023].

33. Gartner, J., Maresch, D. and Tierney, R. (2022) The key to scaling in the digital era: Simultaneous automation, individualization and interdisciplinarity. *Journal of Small Business Management*, 1–28. doi:https://doi.org/10.1080/00472778.2022.2073361.

34. Giles, H., & Coupland, N. (1991) *Language: Contexts and Consequences*. Thomson Learning.

35. Glaveski, S. (2019) Where Companies Go Wrong with Learning and Development. *Harvard Business Review*. Availabe from: https://hbr.org/2019/10/where-companies-go-wrong-with-learning-and-development.

36. Gotthardt, M., Koivulaakso, D., Paksoy, O., Saramo, C., Martikainen, M. and Lehner, O. (2020) Current State and Challenges in the Implementation of Smart Robotic Process Automation in Accounting and Auditing. *ACRN Journal of Finance and Risk Perspectives*, 9(1), 90–102. doi:https://doi.org/10.35944/jofrp.2020.9.1.007.

37. Graham, V.F. (2011) The literature review: a step-by-step guide for students. *Evaluation & Research in Education*, 24(3), 224–225. doi:https://doi.org/10.1080/09500790.2011.583140.

38. Hamilton-Whitaker, T. (2009) Agile Risk Management – Risk Response (3 of 4). *Agile 101*. Availabe from: https://agile101.wordpress.com/2009/07/27/agile-risk-management-risk-response-step-3-of-4/ [Accessed 2 January 2024].

39. Harris, R. (2022) How Automation Helps Boost Employee Productivity. *Datagraphic*. Availabe from: https://datagraphic.co.uk/news/how-automation-boosts-employee-productivity/ [Accessed 10 January 2023].

40. Hennink, M. and Kaiser, B.N. (2022) Sample Sizes for Saturation in Qualitative Research: a Systematic Review of Empirical Tests. Social Science & Medicine, 292(1), 114523. doi:https://doi.org/10.1016/j.socscimed.2021.114523.

41. Hillson, D. (2003) Using a Risk Breakdown Structure in project management. *Journal of Facilities Management,* 2(1), 85–97. doi:https://doi.org/10.1108/14725960410808131.

42. Horton, R. (2017) The robots are coming A Deloitte Insight report. [online] Available from: https://www2.deloitte.com/content/dam/Deloitte/no/Documents/technology/the-robots-are-coming-deloitte-prosessautomatisering.pdf.

43. Hussain, S.T., Lei, S., Akram, T., Haider, M.J., Hussain, S.H. and Ali, M. (2018) Kurt Lewin's Change model: a Critical Review of the Role of Leadership and Employee Involvement in Organizational Change. *Journal of Innovation & Knowledge,* 3(3), 123–127. doi:https://doi.org/10.1016/j.jik.2016.07.002.

44. IT Central Station (2020) RPA: Key Drivers of Time-to-Value. Based on Real User Reviews of UiPath. *UiPath,* 1–12. Availabe from: https://www.uipath.com/resources/automation-whitepapers/it-central-station-time-to-value-rpa.

45. Javadi, M. and Zarea, K. (2016) Understanding Thematic Analysis and its Pitfall. *Journal of Client Care*, 1(1), 34–40. doi:https://doi.org/10.15412/J.JCC.02010107.

46. Jos Arets (2018) The 70:20:10 Model - A different view of work, performance and learning. *70:20:10 Institute*. Availabe from: https://702010institute.com/702010-model/.

47. Jos Arets (2018) The 70:20:10 Model - A different view of work, performance and learning. *70:20:10 Institute*. Availabe from: https://702010institute.com/702010-model/.

48. Kallio, H., Pietilä, A.-M., Johnson, M. and Kangasniemi, M. (2016) Systematic Methodological review: Developing a Framework for a Qualitative semi-structured Interview Guide. *Journal of Advanced Nursing,* 72(12), 2954–2965. doi:https://doi.org/10.1111/jan.13031.

49. Kennedy, M.-R., Huxtable, R., Birchley, G.M., Ives, J.C.S. and Craddock, I. (2020) 'A question of trust' and 'a leap of faith': A qualitative study of participants' perspectives on consent, privacy and trust in smart home research (Preprint). *JMIR mHealth and uHealth*. doi:https://doi.org/10.2196/25227.

50. Kobiruzzaman, M.M. (2022) Netflix Organizational Change & Structure Case Study 2022. Availabe from: https://wp.kennisbanksocialeinnovatie.nl/wp-content/uploads/2022/09/Netflixorganizationalchange.pdf [Accessed 16 January 2024].

51. KPMG (2021) Digital Transformation of finance function using RPA. Available from: https://assets.kpmg.com/content/dam/kpmg/qa/pdf/2021/08/digital-transformation-of-finance-function-using-rpa.pdf [Accessed 20 December 2024].

52. Kuoppala, J., Lamminpää, A., Liira, J. and Vainio, H. (2008) Leadership, Job Well-Being, and Health Effects—A Systematic Review and a Meta-Analysis. *Journal of Occupational and Environmental Medicine*, 50(8), 904–915. doi:https://doi.org/10.1097/jom.0b013e31817e918d.

53. Kuprina, N. and Rudiuk, I. (2017) ANALYSIS OF APPROACHES TO ESSENCE AND CLASSIFICATION OF ACCOUNT RECEIVABLE OF ENTERPRISE. *Food Industry Economics*, 9(2). doi:https://doi.org/10.15673/fie.v9i2.640.

54. Lavelle, J. (2019) Gartner Says Robotic Process Automation Can Save Finance Departments 25,000 Hours of Avoidable Work Annually. *Gartner*. Availabe from: https://www.gartner.com/en/newsroom/press-releases/2019-10-02-gartner-says-robotic-process-automation-can-save-fina.

55. Lee, C.S., Wadhwa, V., Kruskal, J.B. and Larson, D.B. (2015) Conducting a Successful Practice Quality Improvement Project for American Board of Radiology Certification. RadioGraphics, 35(6), 1643–1651. doi:https://doi.org/10.1148/rg.2015150024.

56. Lhuer, X. (2016) The next acronym you need to know about: RPA (robotic process automation) | McKinsey. *www.mckinsey.com*. Available from: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-next-acronym-you-need-to-know-about-rpa.

57. Lombardo, M. M., & Eichinger, R. W. (1996) *The Career Architect Development Planner (2nd ed.).* Lominger International.

58. Malik, P. (2022) Lewin's 3-Stage Model of Change Theory: Overview. *Whatfix*. Availabe from: https://whatfix.com/blog/lewins-change-model/.

59. Mayer, R. E. (2009) *Multimedia Learning (2nd ed.).* Cambridge University Press.

60. Mortensen, D. (2019) How to Do a Thematic Analysis of User Interviews. *The Interaction Design Foundation*. Availabe from: https://www.interaction-design.org/literature/article/how-to-do-a-thematic-analysis-of-user-interviews.

61. Mulholland, B. (2023) 8 Critical Change Management Models to Evolve and Survive | Process Street | Checklist, Workflow and SOP Software. *Process Street*. Available from: https://www.process.st/change-management-models/#Lewin.

62. Nadarajah, D. and Latifah Syed Abdul Kadir, S. (2014) A review of the importance of business process management in achieving sustainable competitive advantage. *The TQM Journal*, 26(5), 522–531. doi:https://doi.org/10.1108/tqm-01-2013-0008.

63. Naydis, I.O. (2020) Agile method in project management: method implementation, competencies of team members and project manager. *Vestnik of Astrakhan State Technical University. Series: Economics*, 2020(4), 15–24. doi:https://doi.org/10.24143/2073-5537-2020-4-15-24.

64. Nunaley, M. (2021) What Is The 70-20-10 Rule In Learning & Development?. *Thinkific*. Availabe from: https://www.thinkific.com/blog/70-20-10-learning-model/.

65. OCM Solutions (2019) Kurt Lewin Change Model | Pros & Cons | What You Need to Know – OCM Solution Blog. *www.ocmsolution.com*. Availabe from: https://www.ocmsolution.com/kurt-lewin-change-model/.

66. Ortiz, D.G. (2007) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches [Book Review]. *Qualitative Research Journal,* 6(2), 205-207. doi:https://doi.org/10.3316/qrj0602205.

67. Pertheban, T.R., Thurasamy, R., Marimuthu, A., Venkatachalam, K.R., Annamalah, S., Paraman, P. and Hoo, W.C. (2023) The Impact of Proactive Resilience Strategies on Organizational Performance: Role of Ambidextrous and Dynamic Capabilities of SMEs in Manufacturing Sector. Sustainability, 15(16), 12665. doi:https://doi.org/10.3390/su151612665.

68. Pillans, G. and Dalton, N. (2020) BUILDING A FUTURE-FIT WORKFORCE: RESKILLING AND RETHINKING WORK. *Corporate Research Forum*. Availabe from: https://www.crforum.co.uk/wp-content/uploads/2021/09/Future-Fit-Workforce-Report.pdf [Accessed 15 January 2024].

69. Polner, A., Wright, D., Schaefer, G. and Thopalli, K. (2022) Automation with intelligence. *Deloitte Insights.* Availabe from: https://www2.deloitte.com/uk/en/insights/focus/technology-and-the-future-of-work/intelligent-automation-2022-survey-results.html.

70. Prasad, S. and Tran, H. (2013) Work practices, incentives for skills, and training. *Labour Economics,* 23, 66–76. doi:https://doi.org/10.1016/j.labeco.2013.03.003.

71. Kalluri, R. (2022) A Human Factors Study of Risk Management of Complex Agile Scrum Projects in Large Enterprises. *International Journal of Business & Management Studies*, 03(08), 38–44. doi:https://doi.org/10.56734/ijbms.v3n8a6.

72. Brown, R.B. (2006) *Doing your dissertation in business and management : The reality of researching and writing.* London: Sage.

73. Gephart, R.P. (2004) Qualitative Research and the Academy of Management Journal. Academy of Management Journal, 47(4), 454–462. doi:https://doi.org/10.5465/amj.2004.14438580.

74. Reaiche, C., Papavasiliou, S. and Anglani, F. (2022) Module 5. Risk and Agile project management. *jcu.pressbooks.pub*. Availabe from: https://jcu.pressbooks.pub/pmriskquality/chapter/module-5-risk-and-agile-project-management/#:~:text=Agile%20risk%20monitoring [Accessed 1 Janaury 2024].

75. Ribeiro, J., Lima, R., Eckhardt, T. and Paiva, S. (2021) Robotic Process Automation and Artificial Intelligence in Industry 4.0 – *A Literature review. Procedia Computer Science*, 181(181), 51–58. doi:https://doi.org/10.1016/j.procs.2021.01.104.

76. Robey, D., Anderson, C., & Raymond, B. (2013) *Information Technology and Organizational Learning: Evaluating Pathways to Success*. Oxford University Press.

77. Russo, K. (2022) Journal Entry Automation: Benefits, Software & FAQs. *Oracle NetSuite*. Available from: https://www.netsuite.com/portal/resource/articles/accounting/journal-entry-automation.shtml.

78. Saunders, M., Lewis, P., & Thornhill, A. (2009) Understanding Research Philosophies and Approaches. *Research Methods for Business Students*, 4, 106-135.,

79. Schwaber, K. and Sutherland, J. (2019) The Scrum Guide. *Scrum.org*. Availabe from: https://www.scrum.org/resources/scrum-guide.

80. Sukavanam, S. (2019) Organizations Need Experts - Digital Transformation | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/digital-transformation/organizations-need-experts-to-achieve-digital-transformation [Accessed 28 December 2023].

81. Szwed, K. (2023) 10 RPA Implementation Challenges You Should Keep In Mind. *Flobotics - Robotic Process Automation Consulting And Development*. Availabe from: https://flobotics.io/blog/rpa/rpa-challenges/.

82. Taylor, P. (2022) Global robotic process automation market 2023. *Statista*. Available from: https://www.statista.com/statistics/740440/worldwide-robotic-process-automation-market-size/.

83. Therrien, E. (2008) Overcoming the Challenges of Building a Distributed Agile Organization. *IEEE Xplore*. doi:https://doi.org/10.1109/Agile.2008.9.

84. Thomas, D.R. (2006) A General Inductive Approach for Analyzing Qualitative Evaluation Data. American Journal of Evaluation, 27(2), 237–246. doi:https://doi.org/10.1177/1098214005283748.,

85. Tuychiyev, A.J. (2010) REFLECTING QUESTIONS ON THE REDUCING OF ACCOUNTS RECEIVABLE AND ACCOUNT PAYABLE OF ENTERPRISES IN THE CONDITIONS OF ECONOMIC MODERNIZATION. *European Journal of Business and Economics*, 1. doi:https://doi.org/10.12955/ejbe.v1i0.78.

86. Uipath (2019) Impact of RPA on Employee Engagement | UiPath. *www.uipath.com*. Available from: https://www.uipath.com/blog/rpa/impact-of-rpa-on-employee-engagement-forrester.

87. UiPath (2020) RPA Software Robots - Robot for Every Person | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/rpa/robot-every-person [Accessed 29 December 2023].

88. UiPath (2023) UiPath Honored Again for Delivering World-Class Customer Service. *UiPath Investor Relations*. Available from: https://ir.uipath.com/news/detail/270/uipath-honored-again-for-delivering-world-class-customer [Accessed 22 Janaury 2024].

89. UiPath Inc (2018). Join our free RPA Academy | Robotic Process Automation Training. Uipath.com. Availabe from: https://www.uipath.com/rpa/academy.

90. UiPath Inc (n.d.). RPA Case Study in Finance - Fleet Innovation | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/resources/automation-case-studies/fleet-innovation-finance-rpa [Accessed 15 January 2024].

91. Ustuk, O. (2022) Thematic Analysis with MAXQDA: Step-by-Step Guide. *MAXQDA*. Availabe from: https://www.maxqda.com/blogpost/thematic-analysis-with-maxqda-step-by-step-guide.

92. V. and Walsh, C.A. (2019) Pragmatism as a Research Paradigm and Its Implications for Social Work Research. Social Sciences, 8(9). doi:https://doi.org/10.3390/socsci8090255.

93. Velocity (2023) UiPath Partners | Velocity IT | UiPath and the Future of Robotic Process Automation |. *Velocity IT*. Availabe from: https://www.velocity-it.com/knowledge-hub/uipath-and-the-future-of-robotic-process-automation/.

94. Vemulapalli, S. (2020) Why an Agile Software Factory Approach is Best to Scale RPA Development. *Emtec Digital*. Available from: https://www.emtec.digital/think-hub/blogs/why-agile-software-factory-approach-best-to-rpa-development/ [Accessed 21 January 2024].

95. Violino, B. (2020) How Organizations Are Training Future Automation Professionals | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/automation/how-to-train-future-automation-professionals.

96. Walliman, N. (2011) *Research Methods: The Basics*. Routledge. doi:https://doi.org/10.4324/9780203836071.

97. Wilkins, C.H. (2018) Effective Engagement Requires Trust and Being Trustworthy. *Medical Care*, 56(10), S6–S8. doi:https://doi.org/10.1097/mlr.0000000000000953.

98. Wu, T. (2020) How To Increase Automation Skills With Citizen-Led Innovation | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/automation/citizen-led-innovation-increase-automation-skills-remote-workforce [Accessed 28 December 2023].

99. Yurovsky, M. (2019) Analytics for RPA Deployment - Automation Analytics | UiPath. *www.uipath.com*. Availabe from: https://www.uipath.com/blog/rpa/analytics-for-rpa-deployment [Accessed 27 Jan. 2024].

APPENDIX A: INTERVIEW QUESTIONS

Interview Question	Objective
How would you describe the manual repetitive tasks involved in Accounts Payable, Accounts Receivable, and General Ledger?	Conducting a high-level evaluation of the manual repetitive tasks to document the entire manual process facilitates a clearer understanding of the process complexity for the team.
How many hours per week do employees dedicate to engaging in the manual processes integral to the operational functions?	To quantify the weekly time commitment of employees involved in manual processes within the operational functions and aim to understand the extent of resource allocation and potential areas for process optimization.
What difficulties did the team encounter in previous attempts to explore and implement RPA solutions in the past?	To identify and analyze the specific challenges and obstacles faced by the team in previous attempts to explore and implement Robotic Process Automation (RPA) solutions to gain insights into potential areas for improvement and successful implementation in future initiatives.
Does the team possess the requisite skill set for end-to-end implementation of RPA solutions, including proficiency in RPA infrastructure?	To assess the team's capability for comprehensive implementation of RPA solutions, including a thorough evaluation of their skill set in both executing end-to-end RPA solutions and managing RPA infrastructure effectively.
Challenges in streamlining the RPA solution, including dependencies and technical deficits.	To identify and analyze challenges in streamlining RPA solutions, focusing on dependencies and technical deficits, to improve the efficiency and effectiveness of the implementation process.
To what extent is the team confident in initiating the use of RPA tools to streamline and automate their repetitive and rule-based manual processes?	To gauge the team's confidence level in adopting RPA tools to streamline and automate repetitive, rule-based manual processes that aim to understand potential barriers and areas for improvement in the implementation process.
How can the research findings be utilized to provide actionable insights and recommendations for the team to effectively implement RPA tools in streamlining and automating their repetitive and rule-based manual processes?	To derive actionable insights and recommendations from the research findings that facilitate the team's successful implementation of RPA tools for the streamlining and automation of their repetitive and rule-based manual processes.

APPENDIX B: ETHICAL FORM

Application for Ethical Approval for a

Research Project Involving Human Participants

(Ulster Business School Research Ethics Approval Form)

This form should be completed by the student undertaking the research in association with the student's supervisor. The form MUST be completed and signed at the end of the form before any research / fieldwork is carried out. Reference should be made to the University Guidance on Ethical Standards* for Research involving Human Participants.

The completed and signed Ethical Approval Form MUST be attached to the final dissertation report (the dissertation will not be marked if the Ethics Form is not attached in the Appendix).

Name of Supervisor:	RAMNIK SINGH
Student Name:	PANKAJ MALIK
Student ID:	B00924086
Project Title:	UTILIZING ROBOTICS PROCESS AUTOMATION IN THE FINANCIAL SECTOR: A PRACTICAL SCENARIO DEMONSTRATING HOW EY CAN DRIVE DOWN COST AND IMPROVE EFFICIENCY FOR ITS CLIENT

Course:	MASTER IN BUSINESS ADMINISTRATION		
Attendance Mode (FT/PT):	FT	Year of Study:	2023-2024
Project Type (PG/UG):	PG		

Summary of proposed research (including planned start and end dates):

This research explores the practical implementation of Robotic Process Automation (RPA) in the financial sector, focusing on Ernst & Young (EY). The aim is to showcase how EY can leverage UiPath RPA tools to reduce costs and improve client financial processes' efficiency. The study addresses challenges, opportunities, and the impact of RPA on EY's market competitiveness. The methodology involves qualitative interviews with EY's operations personnel, focusing on general ledger, accounts payable, and receivable.

Aim : Ernest & Young uses RPA to automate financial processes, cut costs, and boost efficiency in Accounts Payable, Receivable, and General Ledger, ensuring accuracy and reducing manual labor. The goal is to achieve human-independent automation for quicker and error-free results.

Objectives: How can EY effectively implement Robotic Process Automation (RPA) in the financial sector

What is the impact of RPA on cost and efficiency for EY?
How does UiPath's RPA tool contribute to financial automation, particularly in EY's context?
What are the challenges and opportunities associated with implementing RPA in financial processes at EY?
What are the long-term implications of RPA implementation for EY's market competitiveness?
The research commences on December 15, 2023, and concludes on January 31, 2024.

Start Date:	15/12/2023	End Date:	31/01/2024

Does your proposed research involve any of the following (Please choose Yes or No):

Deception of participants? (i.e. do they understand the implications of participating in a research study?)	**No**
Inducements to participate? (i.e. are participants being offered any 'prize' for agreeing to participate in the study?)	**No**
Possible psychological stress? (i.e. will you be asking about potentially sensitive personal issues)	**No**
Any other special circumstances?	**No**

If you have answered "yes" to any of the above, please provide details regarding how you will deal with these issues?

Please provide details of the likely participants involved in the research (i.e. details of vulnerable groups* e.g. children, the elderly, people with a learning disability):

Employees within EY's finance team, specifically aged between 30 and 40, constitute a sample size of 6-7 people.

Please provide details and justification for the methodology to be used in the proposed research (please attach copy of questionnaires/interview routines):

This research adopts a qualitative approach, focusing on EY's Client Financial Operations. Through purposeful sampling, in-depth interviews will be conducted with EY employees in roles like general ledger, accounts payable, and receivable. The qualitative data will be analyzed to uncover insights into RPA complexities. To ensure reliability, a triangulation approach will be used by merging opinions from multiple participants. The methodology aligns with ethical guidelines, prioritizing participant confidentiality. The focus on UiPath RPA tools adds practical value, aiming to provide actionable insights for EY while contributing to a broader understanding of RPA's impact in the financial sector.

If you are using interviews no participant should be engaged or approached to take part in the research without obtaining informed consent (Please attach copy of information sheet and consent form or use the space below to provide justification why informed consent does not need to be sought):

Confidentiality of Data (Please choose Yes or No):

Have steps been taken to ensure confidentiality of data? (rationale for anonymity and data storage, etc)	**Yes**

Please provide details on what steps have been taken to ensure confidentiality of data:

I will ensure interviewee data confidentiality by obtaining informed consent, assuring anonymity, using secure communication, and restricting access to authorized personnel. To elaborate on maintaining confidentiality, I will implement encryption protocols for data transmission, store information on secure servers with restricted access, and conduct interviews in private settings. Furthermore, a disclaimer page/CONSENT FORM will be included to inform participants about the purpose of data collection, its usage, and to emphasize the voluntary nature of participation, allowing participants to withdraw at any time.

Signatures:

Staff / Supervisor:	Ramnik Singh	Student:	PANKAJ MALIK	Date:	02/01/2024

APENDIX C: CONSENT FORMS

Consent Form Yugendra Balachandı

Consent Form Sumeet Mittal.docx

Consent Form Harsh Mehta.docx

Consent Form Gaurav Singh.docx

Consent Form Allwin Peter.docx