Achieving Operational Service Line Efficiencies in a Cloud Computing Technology Vendor

AN ACTION RESEARCH INQUIRY

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CERTIFICATION STATEMENT

I hereby certify that this research paper constitutes my own work and product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions or writings of another.

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ABSTRACT

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This action research aims to understand the challenges faced by a cloud computing vendor in achieving operational efficiency for a specific service line and provides a practical framework that can be recommended for achieving operational efficiencies. The emergence of business problem, mainly in achieving sustainable performance, was apparent through the increase in costs, reduced revenues, and declining profit margins. The research provides insights into how the service line can address these challenges to enhance its performance.

The study utilized a qualitative approach to data collection through semi-structured interviews with a sample of 12 stakeholders from the service line who have experience in service line strategy, execution processes, and defined performance indicators. The interviews were conducted with personnel from a UAE-based cloud computing technology vendor to explore and identify the challenges faced. Action research was carried out in three cycles to identify focus areas, determine future recommended actions, and plan for their execution. The cycles included the identification of expected challenges and the development of strategies to mitigate them. Thematic analysis was conducted to identify

critical areas impacting performance and success indicators, such as revenue, costs, services-sales bookings, and financial margin.

The findings were developed collaboratively and ethically to empower company participants. The study outcome outlines four focus areas to achieve operational efficiency in a service line: establishing foundations for success to cultivate a successful work culture, growing cloud service sales bookings and consumption, ensuring project delivery excellence, optimizing project cost and maintaining sustainability measures. Future recommended actions for each layer are detailed in the study.

The study examined specified theoretical organizational concepts and disciplines. The findings propose a significant contribution in terms of the cloud computing service company and its organizational development by providing a practical execution framework for achieving service line operational efficiency, that can be implemented. The study emphasizes the importance of collaborative stakeholder engagement to generate knowledge. The framework provides cloud computing vendors with a practical tool for enhancing their service line operational efficiency which allows sustainable service line growth focused on crucial performance and success indicators.

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“The only way to do great work is to love what you do.”

Steve Jobs

List of Abbreviations

ADR	Average Daily Rate
ARR	Annual Recurring Revenue
B2B	Business-to-Business
B2C	Business-to-Consumer
BaaS	Business-as-a-Service
BM	Business Models
BMI	Business Model Innovation
BMP	Business Model Patterns
BTT	Business Transformation Team
BRT	Business Readiness Team
BYOD	Bring-your-own-device
C@C	Cloud at Customer
CAPEX	Capital Expenses
CBA	Consumer Buying Agents
CFO	Chief Financial Officer
CIO	Chief Information Officer
CRM	Customer Relationship Management
CX	Customer Experience
CxO	Chief-level executive
DE	Digital Economy
E-commerce	Electronic Commerce

EM	Engagement Manager
EMEA	Europe, Middle East and Africa
EPM	Enterprise Performance Management
ERP	Enterprise Resource Planning
FP	Fixed Price Contracts
FTEs	Full Time Employees
GBU	Global Business Unit
GSC	Global Solution Center
HC	Head Count
HCM	Human Capital Management
IaaS	Infrastructure-as-a-Service
IoT	Internet of Things
IP	Innovation Portal
IPAs	Intellectual Property Assets
IS	Information System
ISV	Independent Software Vendor
IT	Information Technology
KPI	Key Performance Indicator
MEA	Middle East and Africa
ME	Middle East
NPS	Net Promoter Score
OE	Operational Efficiency
OP	On-Premises Model (Hosting enterprise applications at client premises)

OPEX	Operational Expenses
PaaS	Platform-as-a-Service
PMO	Project Management Office
RQ	Research question
ROI	Return on Investment
RFI	Request For Information
RFP	Request For Proposal
SaaS	Software as a Service
SCM	Supply Chain Management
SKUs	Stock-Keeping Unit
SLA	Service Level Agreement
SVP	Senior Vice President
T&H	Time and Hire
T&M	Time and Material
TCO	Total Cost of Ownership
TCM	True Cloud Method Methodology
UAE	United Arab Emirates
VP	Vice President
XaaS	Everything-as-a-Service
YoY	Year-Over-Year

1 Chapter 1 Introduction

In today's highly competitive and rapidly evolving information technology landscape, operational efficiency is a key determinant of success for service lines within cloud computing vendors. As vendors face various challenges in maintaining and improving operational efficiencies, this study becomes increasingly relevant. This chapter aims to provide a clear and concise overview of the study, outlining its context, scope, and objectives, as well as its potential contributions to both practice and theory regarding the achievement of operational efficiencies in a service line within a cloud computing vendor.

The chapter is structured into six sections. The first section provides the topic and context of the study, which illustrates the company context, the current business role of the researcher, and the workplace business problem that the study aims to address. This is followed by the focus and scope section, which outlines the current business model, deliverables, and assumptions that guide the study. The third section discusses the relevance and importance of the research, highlighting its potential contributions to the field and to the organization. The research questions and objectives of the study are presented in the fourth section, followed by an overview of the structure and summary of the chapter.

1.1 Topic and Context

This section outlines the company background, the current business role of the researcher, and the workplace business problem under research.

The action research project was conducted at a leading cloud computing vendor based in Dubai, United Arab Emirates (UAE). The company operates in several countries, including the UAE, Saudi Arabia, Qatar, Kuwait, Bahrain, Oman, Lebanon, and Jordan, and specializes in selling cloud computing software and hardware technology products. The company has data centers located in various locations worldwide, including four public data centers in the Middle East region such as UAE and Saudi Arabia.

The company has several business lines, including cloud technology, software, service, support, and education. The research project focused on the company's service line, which is responsible for implementing the company's products. This involves defining client business requirements, product configuration, solution testing, and data migration to the production environment that the client end-users will use (Graupp, Ahlemann and Kovács, 2019).

From a financial perspective, the company reports to the regional office of Europe, Middle East & Africa (EMEA), which in turn reports to the company's headquarters in the United States. To maintain confidentiality, the name of the company has not been disclosed in this research study.

1.1.1 Researcher’s Background

In this action research, I, the researcher, have a strong professional background that has shaped my approach to this study. I hold a Bachelor's degree in Electrical Engineering, and a Master's degree in Business Management from the University of Liverpool. With 19 years of experience working with the company under research, I have gained considerable knowledge and insights into its operations and challenges.

For almost 15 years, I have been working with the service line in various roles, including architecture, project management, sales, and managerial positions. This diverse experience has provided me with an understanding of the complexities of the service line, which enabled me to contribute effectively to the action research project.

1.1.2 Current Business Role & Role Duality

At the time of starting the action research project in January 2020, my role was the sales leader of the service line of the Middle East region. In September 2020, I was promoted to lead the technology service line of both its services-sales and project delivery functions in the Middle East region. As part of my business role, I own the service line strategy execution to achieve the performance and success indicators set by the company leadership in EMEA.

The service line performance and success indicators are as follows: the service line revenues, costs, margins, services-sales booking, employee project utilization, subcontractor costs, average daily rate, and cloud computing usage (named as cloud consumption). Appendix E illustrates the service line performance and success indicators.

As a practitioner and researcher, it was apparent that the gained experience has afforded me a unique perspective with some degree of role duality. To manage any potential conflict between my practice and research roles, I have maintained a communication approach that depends on trust, transparency and open communication with my colleagues and my management, discussing clearly my research objectives and their potential value on the service line. One of the challenges I faced during the study was the service line quarter closure period, which made it difficult to schedule meetings with some stakeholders for data collection and validation of their perspectives. However, I managed this issue without creating a stressful environment by agreeing on suitable time slots with the stakeholders. It became apparent that, to avoid scheduling conflicts, it was best to refrain from conducting such meetings at least three weeks prior to the end of the fiscal year quarter.

As an insider researcher, my positionality within the study has both advantages and disadvantages. On one hand, being familiar with the company's culture, processes, and challenges enabled me to access valuable information, establish trust with the stakeholders, and interpret findings with a deep understanding of the context. On the other hand, my position could introduce a bias and influence the interpretation of the findings. To address this, I have maintained reflexivity throughout the research process, consistently reflecting and validating my assumptions, values, and potential possible biases, while also seeking feedback from participating colleagues to ensure the validity and reliability of the study. Positionality and duality are explained further in section 3.4.

1.1.3 Workplace Business Problem

In 2020, the service line at the EMEA reporting level faced a significant challenge in achieving operational efficiency and maintaining growth in its performance and success indicators. This was evidenced by the decline in the service line's financial margin year over year. The service line lacked a structured framework for achieving operational efficiency and instead relied on reactive measures to resolve issues as they arose. This reactive approach often resulted in substantial cutting costs actions, including employee layoffs, which negatively impacted employee morale and the service line's reputation as a preferred workplace. Also, such actions were extended to reduce spending budgets that could be used for employee training and enablement. The COVID-19 pandemic presented additional economic challenges to achieving operational efficiency as the global economy was not designed for distance interactions. The pandemic created the need to prepare businesses to transform from a physically interacting economy into a distance-working economy at accelerated pace, that transformation could require time to happen, as the global economy was not prepared for remote business (Al-Habaibeh et al., 2021).

To address these issues, an action research project was initiated to identify the root causes of the service line's lack of operational efficiency and to develop a practical framework for addressing the challenges. The idea for this action research project was sparked by my emotional reaction to seeing my colleagues being laid off. After discussing this with my direct manager, who was also the Vice President (VP) of the service line, we decided to pursue a research project to identify ways to improve operational efficiency and avoid such drastic measures in the future. The project received the necessary ethical approvals from the company and the university before proceeding. By identifying and addressing these challenges, the action research project aimed to provide the service line leaders with a structured and practical framework for achieving operational efficiency and create a more stable and positive work environment for the service line employees and to support the long-term growth and success of the service line.

1.2 Focus and Scope

This section outlines the current business model of the service line, the deliverables that are aimed to be achieved, and the assumptions that were taken into consideration throughout the action research project.

1.2.1 Current Business Model

Figure 1.1 shows the current business model of the service line. The service line runs a hybrid business model that combines both the onsite and offshore resourcing capabilities to deliver the service line key performance indicators, mainly the revenue, cost, margin, sales bookings and resource utilization. The service line has sales and delivery functions such as the client solution executives (service line sales employees), functional and technical consultants, architects, and bid managers while having most of the delivery capabilities at the offshore (in India) and nearshore (in Egypt and Greece) centers. The business model diagram presented was developed based on the researcher's knowledge and experience of the service line's operations. The diagram was developed through a process of iterative design and validation, drawing on the researcher's experience working with the service line and engaging with the service line VP.

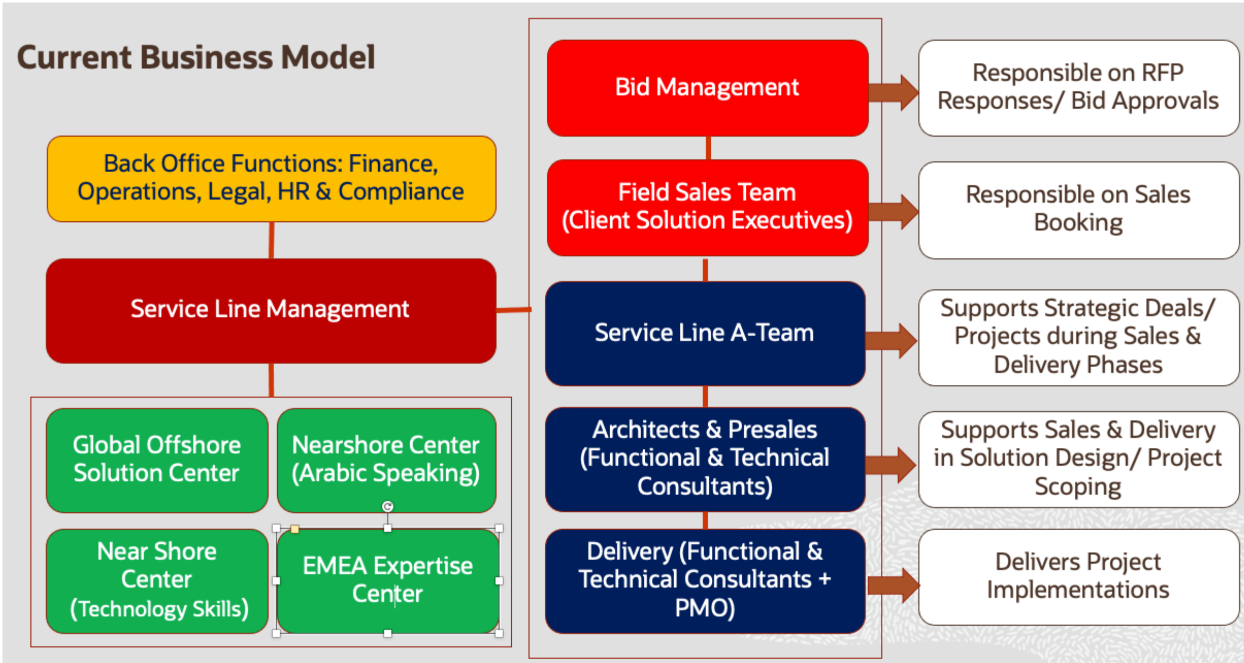

Figure 1.1 Service Line Business Model (As of Jul 31, 2020)

Offshore and nearshore centers offer different benefits for the organization. Offshore centers provide top-notch technology skills, while nearshore centers offer highly talented capabilities with regional language requirements at reasonable costs. The EMEA expertise center can provide niche product implementation capabilities in specialized areas if needed.

The bid management team is responsible for the submission of bids in accordance with the service line's defined quality measures. Before submission, the team obtains all necessary company approvals, including the approval of business leaders, as well as recommendations from the finance and risk management teams. Client solution executives are accountable for achieving the service line's sales targets, and represent the service line's front line during the sales cycle with clients and prospects. They are also responsible for managing communication with other business lines in the company. Once a deal is signed, the delivery team takes over and manages the project delivery execution. This includes planning, resource allocation of functional, technical, architecting, and project management capabilities, and delivery of the scope within the expected quality, time, budget, and service line performance indicators. Relevant documents and background information are handed over to the delivery team to facilitate a smooth transition.

The global solution center offers not only offshore capabilities but also maintains a collection of reusable solution assets accessible via the service line innovation portal. Upon completion of a project, the delivery team nominates potentially reusable solutions, which then go through a qualification and approval process.

The A-Team (A reflects the technical strength of the team members) within the service line comprises highly skilled employees, as rated by the service line managers in accordance with the classification system provided by the human resources department. Back-office functions such as business operations, finance, legal, human resources, ethics, and compliance support the operational activities of the service line. The service line's business results are reported quarterly, with the company's financial fiscal year. The global financial statement reports revenue, cost, and margin as service line performance indicators.

The service line leaders concentrate on achieving the desired outcomes of the service line's performance indicators, as detailed in Appendix E, by implementing the business operational model illustrated in Figure 1.1.

1.2.2 Aimed Deliverables

The action research project aimed to achieve operational efficiencies by designing a framework of actions that can be followed by the service line leaders and middle management layer to achieve operational efficiency in a cloud computing vendor. If followed, such a framework would provide the service line's financial stability, improve employee's engagement and scalability for future growth. This would have enabled the service line to invest in employees by creating learning and career aspiration plans and also investing in developing innovative technological solutions using the company's product technology. As part of the deliverables, the action research outcome framework was planned to have the focus areas where actions had to be implemented, the recommended actions and sub-actions, how to take the actions into implementation, and what could be the implementation challenges and how to mitigate such challenges. The aimed deliverables were validated as part of stakeholder engagements (the research project participants), which included three research cycles. The outcomes of each research cycle were used to refine and validate the framework.

1.2.3 Assumptions

The action research was conducted within the service line responsible for delivering cloud technology implementation projects. These projects were related to the company's cloud technology products such as security, infrastructure, analytics, digital experience, and integration products. The services related to any type of contract or delivery engagement with service level agreement (SLA) commitment, were excluded, whether related to SLA on response or resolution, as it was outside the scope of the delivery of the service line.

Furthermore, the exclusion included any implementation services related to industrial applications that presented industry core solutions to the market, such as billing applications in the telecommunications industry or core banking applications for banks, as another business line delivers such services in the company, called global business units.

As a geographical consideration, the action research was applied to the Middle East territory as per the company definition. This included the countries of the United Arab Emirates, Saudi Arabia, Qatar, Kuwait, Oman, Lebanon, and Jordan.

1.3 Relevance and Importance

This section outlines the relevance of the action research project, the importance of conducting such research, and my role as a researcher with its impact on the research outcome.

1.3.1 Relevance of Research

The following section explains the relevance of various organizational disciplines and concepts to the business problem. Schein (2010) explored organizational theory and its impact on employee performance, which is influenced by factors such as organizational structure and work culture. It is evident that work culture could be one of the critical factors affecting operational efficiency, as per the research outcomes. Keyton (2017) investigated communication theory and its effects on employee behavior, focusing on effective communication with client stakeholders and relationships among employees. It was apparent, as per the stakeholders' views, that employee cohesiveness could be a root cause of the business problem, as well as the perceived value of employee contributions to the service line clients. Gagné (2014) examined the role of employee motivation in organizational performance, an important aspect to review given the morale and security concerns arising from employee layoffs. Northouse (2021) highlighted leadership theory, which is crucial for understanding the challenges in executing and maintaining the service line strategy and its influence on declining financial margins. Decision-making theory, as analyzed by Adair (2022), offered insights into the factors affecting client decision-making processes. This was crucial for understanding the impact on the service line's sales performance. Finally, Hayes (2022) discussed change management theory, which was essential for ensuring the effectiveness of implementing actionable knowledge as part of a new working framework.

Regarding concepts, previous studies have emphasized the significance of cloud computing technology for revenue growth and operational efficiency. Bhattacharya and

Upadhyay (2018) posited that cloud computing technology could provide clients with new revenue streams and superior service quality at competitive prices. Vithayathil (2017) evaluated information technology governance within the realm of cloud computing, observing that its evolution allowed business employees to select cloud vendors directly. These insights suggest that the demand for service lines in cloud computing vendors has the potential to fuel future growth. Pedersen, Slavich, and Khaire (2020) proposed that technology and innovation are driving forces in modern economies, particularly the experience economy, which emphasizes the creation of memorable moments. Companies can showcase these remarkable moments by sharing client experiences. Lakshmi, Sricharan, and Vijayakumar (2020) found that technology can considerably improve operational efficiency through automation and resource optimization. Likewise, Weber et al. (2020) examined the role of autonomous consumer buying agents (CBAs) in streamlining purchasing processes with minimal human involvement. This body of literature highlights the value of technological advancements and their capacity to strengthen the demand for service lines within cloud computing vendors to implement such technology solutions.

Achieving operational efficiency can lead to several benefits for the service line and the cloud computing vendor as a whole, such as reducing costs and increasing profitability, enhancing the quality of services provided to clients, investing in employee training and career development, and improving competitiveness in the market. The results of the action research can be beneficial not only to the Middle East region under study but also to other regions where the company operates. One of the key components identified in the action research project was the importance of service line employee cohesiveness and talent attraction tools. These components were recognized by the company stakeholders as crucial elements for the success of the service line. The implementation of these components can lead to increased employee engagement, retention, and attraction of new talents, resulting in improved operational efficiency and increased profitability. The proposed framework and actions can be customized and implemented in other service lines in different regions with some modifications to fit the local context.

1.3.2 Importance of Research

There are three key reasons for conducting this action research project. Firstly, at the company level, achieving operational efficiency will positively impact the financial health of the organization. By optimizing processes and reducing costs, the company can generate more revenue and maintain healthy stock prices, which can lead to greater shareholder satisfaction and confidence in the company's future growth. Additionally, improved operational efficiency can provide job stability and protection to employees in various roles, including sales, delivery, architecture, and more.

Secondly, at the individual career level, this action research provides a clear roadmap for service line leaders and mid-level managers to follow to achieve operational efficiency. The project can enhance their professional skills, which can enable them to take on senior roles within the service line and potentially manage profit and loss (P/L) organizations on a larger geographical scale. Additionally, it can improve their decision-making skills, which can lead to more effective management and decision-making processes within the service line.

Finally, at the social and environmental levels, achieving operational efficiency and maintaining growth indicators can create new career development for employees. The action research also considers sustainability measures to deliver implementation projects, which includes reducing carbon dioxide emissions associated with air travel and transportation. By implementing sustainable practices, the service line can contribute to a better environment and a more sustainable future.

1.3.3 Researcher's Role & Its Impact on Research Outcomes

As a service line director in the action research project, my role was to facilitate and promote an inclusive environment that encouraged open dialogue among the project participants. This ensured that the development of the business framework for achieving operational efficiency in our cloud computing service line was a result of collective efforts (Kemmis and McTaggart, 2005). I took a step back from directly influencing the outcomes and allowed the diverse perspectives of all participants to guide the research process and outcomes.

Throughout the study, I leveraged my expertise and experience to provide valuable context and insight while emphasizing the importance of participative and collaborative nature of the research project, to reaching a consensus among participants. I consistently maintained a neutral position, ensuring that the majority's views were taken into account and that the research outcomes were not influenced by my professional authority (position power) or personal biases. This approach not only promoted transparency but also encouraged trust and collaboration among team members (Coghlan, 2019).

As the owner of the execution of the service line strategy, I am responsible for achieving key performance indicators such as revenue, service sales, and cost management. Recognizing the significance of these objectives, I ensured that the research focused on identifying actionable solutions that would contribute to the achievement of these targets.

The impact of my role on the action research project was important in ensuring that the study resulted in a well-rounded business framework that factors in the perspectives of the engaged stakeholders in the service line. This approach also promotes the sustainability of the proposed solutions and enhances their potential for successful implementation.

1.4 Questions and Objectives

This section presents the research questions to be addressed as part of the action research project, as well as the objectives derived from the project.

1.4.1 Research Questions

At the outset of the action research project, the research questions were formulated to understand how, in the context of an IT cloud computing vendor and experience economy, the growth of the service arm could be achieved through the transformation of field service salespeople in the Gulf State region of the Middle East. Additionally, the research aimed to explore how operational efficiency could be improved by implementing autonomous buying agent tools to reduce the dependence on human field service sales roles and to identify the critical differential changes in organizational buying behavior that affect decision-making processes when purchasing cloud computing enterprise applications. These questions were informed by the literature review conducted at the project's commencement, before the action research cycles began. It was assumed that these questions would be validated during the first action research cycle with contributions from the engaged stakeholders.

However, after completing Cycle 1 and defining the key focus areas of the action project, the initial thoughts about defining research questions were deemed irrelevant by the engaged research participants in relation to the work required in Cycles 2 and 3 of the action research. Consequently, the research questions, which were validated with the engaged stakeholders after Cycle 1, are as follows:

1- What are the focus areas in a cloud computing company to achieve operational efficiency in a service line of business?

2- What actions are recommended for future implementation?

3- What are the anticipated challenges and potential mitigation strategies when considering the implementation of the recommended actions for achieving operational efficiency?

The nature of the research project is flexible and iterative, as detailed in Chapter 3, involving cycles of planning, acting, observing, and reflecting (Coghlan, 2019). After the first cycle of interviews, and after validation with engaged participants, it was appropriate to define the research questions that better align with the emerging insights and issues. It is essential to consider the collaborative nature of the research project (Kemmis & McTaggart, 2005); therefore, decisions regarding changes to the research questions involved discussions and consensus among the research team after analyzing the findings of Cycle 1. This ensures that the revised research questions reflect the collective understanding and address the shared perspectives of the participants involved in the study. Section 7.1 explains the changes in the research questions based on the engaged stakeholders' views.

1.4.2 Objectives

The aim of this action research project was to provide an actionable framework that the service line business leaders can follow to achieve operational efficiency in a cloud computing vendor's service line. Operational efficiency, in the context of this action research, is defined as the ability to produce favourable outcomes within a specified period, that is characterized by growing and robust performance indicators within the service line. By achieving operational efficiency, the service line can have the financial stability foundation that allows a future business growth. Hence, the research objectives are:

- Understanding the reasons behind declining service line profit margins and identify effective focus areas to grow profit margins.

- Transforming the working environment to promote employee motivation and engagement. This transformation seeks to enhance job satisfaction and stability, creating an atmosphere for innovation.

- Developing a practical approach to increase revenue figure and optimizing operational costs to improve profit margins. This involves identifying and implementing effective methods to grow the service line revenues and focus on efficient resource allocation and process streamlining to reduce unnecessary expenditures while maintaining or enhancing service quality.

To accomplish these objectives, the project was conducted in three cycles. The first cycle aimed to define the focus areas for implementing the actions. The second cycle aimed to define the recommended actions for each focus area. Lastly, the third cycle focused on planning how to put the actionable knowledge into practice, identifying the implementation challenges, and suggesting ways to mitigate them. The result of the research project is an actionable framework consisting of 11 key actions across the identified focus areas, designed to achieve operational efficiency within the service line.

The action research project was conducted with 10 company service line stakeholders for each cycle (except for cycle 1, it was 12 stakeholders). The basis for selecting these participants was their experience and knowledge in the service line, as well as their ability to contribute to the project's objectives. The diversity of roles was part of the selection criteria, including people who have sales roles, project management roles, architect roles, or service line managerial roles. Gender diversity was aimed for, but it was limited due to the low percentage of women in the service line at the time of the research. The participant involvement included providing their valuable insights, feedback, perspectives, and suggestions throughout the three cycles of the action research project.

The study's time period spanned three and half years, which allowed for an in-depth examination and analysis of the research objectives.

1.5 Overview of the Structure

In chapter 2, the literature review played a key role in developing the implementation framework of the action research by highlighting the key concepts and organizational disciplines related to cloud computing and operational efficiency. The study's methodology is outlined in Chapter 3, adopting an action research approach with a mixed epistemological stance that integrated both constructivist and constructionist perspectives. The primary data collection method used was semi-structured interviews. A participatory and collaborative action research approach was selected.

Throughout the three action research cycles detailed in Chapters 4 to 6, the researcher actively participated in the research process by facilitating data collection, analyzing results, and working collaboratively with the participants to develop actionable knowledge. This involvement promoted a collaborative and participatory atmosphere with the engaged stakeholders, ensuring that the research outcomes and insights gained from the project were free from the influence of position power and personal biases. This was achieved through transparent communication channels and inclusive decision-making practices, actively encouraging open dialogue, diverse perspectives, and equal contributions from all the engaged participants.

The key conclusions and recommendations obtained from the research are presented in Chapter 7. These findings emphasize the importance of stakeholder engagement in producing a structured and practical approach to achieving operational efficiency in a service line of a cloud computing vendor. The chapter also reflects on the researcher's learning experiences, the limitations of the study, and potential ideas for future research to further explore and expand upon the action research findings.

1.6 Summary

This chapter commences by emphasizing the business issue that affected the operational efficiency of a service line within a cloud computing company. The issue was linked to the declining financial margin of the service line, leading to difficulties for the service line leaders. Consequently, they made reactive decisions that had social impacts, such as cutting employee jobs and reducing spending budgets for activities like employee training. This resulted in a decrease in morale and motivation among the service line employees. The chapter provides context and background information on the business problem, as well as relevant organizational disciplines and concepts that could potentially address this issue.

Subsequently, the chapter presents the research questions and objectives. The research questions aim to explore potential focus areas for resolving the business problem, generate an actionable framework to resolve the business issue and examine how to implement these actions as future recomendations. The research aim describes the desired outcome of the research: to create an actionable framework for service line leaders to utilize in order to achieve operational efficiency.

The chapter concludes by introducing the action research approach as a methodology to accomplish the research aim and objectives, explaining the cycles of the action research and summarizing the stakeholders involved. Finally, the chapter offers an overview of the thesis structure and outlines the contents of the remaining chapters of the project. The following chapter considers the study's methodology, outlining the research philosophy, approach, data collection and analysis methods, as well as challenges and mitigations.

2 Chapter 2 Literature Review

This chapter aims to elaborate on the knowledge in the research area; achieve service line operational efficiency in a cloud computing vendor; and identify an actionable framework as a roadmap to achieve the research objectives. This chapter illustrates critical thinking of existing relevant literature, and identifies areas of key debates, tensions, contradictions, and potential knowledge gaps.

2.1 Introduction

The action research project was a result of declining margins of the service line in a cloud computing vendor, and the aim of the research is to create a framework that can allow achieving operational efficiency of the service line by defining actionable knowledge that can lead to that. Table 2.1 illustrates the important relevant concepts captured during the literature review.

Table 2.1: Literature Review of Relevant Concepts

	Category	Concepts
1	General	Evolution of cloud computing, COVID-19 pandemic impact, experience economy, distance economy, digital meeting.
2	Service Line Related	Value impact, employee impact, innovation, growth and efficiency paradox, shareholder expectations, employee impact, key performance indicators.

3	Working Culture Foundations	talent attraction tools, digital disruptors, technical pioneers, talent retention, diversity impact, lifelong learning, team collaboration, cohesiveness.
4	Clients & Services-sales Impact	Purchasing behaviour, artificial intelligence impact, client loyalty, net promoter score, customer adaption, change management, value-based offering impact, everything-as-a-service, business-as-a-service, cloud solution-in-a-box, IT-as-a-service, business process agility, sales process automation, enterprise solutions portal, consumer buying automated bots, chatbot , sustainability, change management.
5	Employees	Objectives, performance reviews, team cohesiveness, diversity, and lifelong learning, cultural paradox, employee wellbeing, digital disruptors and technology pioneers, right skills.
6	Sustainability	Zero-carbon emissions, smart cites, stakeholders awareness.

For several years, cloud computing technology evolved, leveraging the internet power to provide both infrastructure and business software solutions to the markets (Attaran and Woods, 2019). Cloud computing technology is a method to deliver computing services such as software, storage, memory, and processing power over the internet to the users, instead of running applications or storing data on a local computer or server at the client's side. Users can access computing resources remotely via the internet and cloud providers charge customers based on usage. There are different types of cloud services, including Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS), each of which offers different levels of access and control to users (Buyya et al., 2009). Such evolvement was associated with accelerated cloud computing business growth due to the effects of the COVID-19 pandemic, which were instrumental in impacting the technology industry to enable businesses to have the right infrastructure that can enable employee to work from remote locations (Alashhab et al., 2021).

The literature review structure is thematic (organised about several key themes), starting from the broader meaning of the topic (i.e cloud computing technology) and narrowing it down to the details (i.e understanding what influences the achievement of operational efficiency in a service line in a cloud computing vendor). The chapter is designed in sections, starting with literature review planning and search strategy, review discipline, and searching challenges, then followed by the evolution of cloud computing technology and advantages as well as the associated market dynamics, the importance of Service Line operational efficiency, how to achieve operational efficiency in a service line of a cloud computing technology vendor , then the key organizational disciplines/concepts underpin the action research and key findings, the impact of literature review on research methodology and finally the summary.

2.2 Literature Review Planning & Search Strategy

This section outlines the planning steps to execute the literature review activity, and the searching strategy. The literature review strategy was planned in 4 steps. First, was to define where to search, and sort out by the most cited results as well as the publish date, taking into consideration the recent ones. The search portals used were mainly the University of

Liverpool portal via the online library and Google Scholar. The plan was to qualify the sources based on peer reviews and practitioner material to obtain businesspeople experience in the field and published in the last five years. However, due to the limitations of finding relevant knowledge in some areas that addresss the service lines within cloud computing vendors, the time span of sources got extended to the best possible to cover the last 15 years as the literature is limited to the cloud computing technology service business, and limitations exist to apply to the countries under research. Exceptions were applied especially to the theoretical references especially when definitions were required or understanding of the organisational concept or discipline. Also to other sources that can allow better understanding of the argument, knowledge, and assumptions. The selected sources were a mixture of peer-reviewed sources and practitioner material for the aim to collect as much as possible the existing knowledge for the topic under research. Examples of practitioner materials are industry magazines, whitepapers and books aimed at industry-specific professionals, such as Frei (2008) and Groysberg, Kelly, and MacDonald (2011).

The practitioner material has demonstrated similarities to the theoretical findings and study outcomes. For instance, the emphasis on customers, employees, and business processes during change management processes aligns with the suggestions made by Frei (2008). The study's results propose improvements to the service line framework based on stakeholder opinions such as focusing on sustainability, which is supported by Groysberg, Kelly, and MacDonald (2011). This evidence highlights the valuable connection between practical business insights and academic research, as both contribute to a comprehensive understanding of effective change management strategies.

The second was to define the related keywords related to the research title and questions, starting from the wider topic of cloud computing technology and then narrowing down to what affects the operational efficiency of a service line within a cloud computing vendor. The approach was to search using relevant themes that could match the relevant areas of the research or relevant organisational concepts/ disciplines related to the research. Table H.1 shows an example of the keywords and phrases (themes) that have been used during the search process. The search was done by title subject and/or keywords, supported by Boolean operators such as OR, AND, and NOT to narrow down the search results.

Third, was to review the abstract and explore its relevance to the research topic, scanning the bibliography to find more relevant resources, and consider the citations count of google scholar to assess importance of the source. And finally, in case of abstract relevance, then detailed review was performed to understand the research aim, objectives and questions and relate it to the current research to explore the areas of key debates, tensions, contradictions and knowledge gap. Table H.1 (Appendix H) shows a sample of used keywords and phrases used during the literature review search process.

The aim of the initial planned research questions was to find out the potential model that can ensure the success of a service line in a cloud computing vendor as well as understand how buying agents can improve efficiency and what changes affect the decision-making purchasing behaviour. However, the outcome of action research cycle 1 (detailed in Chapter 4), resulted in defining new focus areas to achieve operational efficiency, and that resulted in extending the literature review efforts to understand the literature relevance against the defined actionable-knowledge focus areas.

In conclusion, the literature review planning searching strategy was conducted in four steps, using a thematic structure and searching in both peer-reviewed and practitioner material for a time period of 15 years. Relevant literatures were examined, related to business management, information systems, and organizational management, with an emphasis on the specific issues related to the workplace problem. However, the researcher faced challenges due to the limited literature available on similar types of business companies and the geographical area under research.

The next section illustrates the cloud computing technology evolution, its advantages and market dynamics.

2.3 Cloud Computing Evolution, Advantages & Market Dynamics

This section outlines the cloud computing technology evolution and advantages, as well as the impact of market dynamics due to the experience economy and COVID-19 pandemic that the researcher considers during the research planning phase.

2.3.1 Cloud Computing Technology Evolution

Idrissi and Abourezq (2014) defined the cloud computing concept as a technology model, which has connected resources that establish an accessible network of shared resources, and a client can access this network and pay for their usage. With its advantage that it can reduce costs, it evolved rapidly as mentioned by Garrison, Kim and Wakefield (2012) that cloud computing technology assists in reducing capital expenditures (CAPEX) and Operational Expenses (OPEX), and also allows companies to focus on to their core activities rather than getting into the technical complexity. Such a technology advantage improved operational efficiency as it allowed companies to recognise revenues faster due to the saved time of system and solution deployments. Neumann (2014) studied more benefits as cloud services can reduce the time to operate as it avails business applications that are ready to use, simplify the administration layer, and eliminate the time required to purchase hardware and install it.

Romero (2012) discussed the reasons for the rapid evolution of cloud technology and found that one of the main factors is the easy usage of non-expert users when they access the hardware and software resources over the internet. Alali and Yeh (2012) also added, that such a drop in the costs encouraged many of the decision-makers to transform their business into the cloud, which presented a real threat to the non-cloud service providers. In his study, Raths (2014) said that about 46% of the state and government officials were in the plan or had already decided to move to the cloud. In studying the several advantages due to the rise of cloud computing technology in recent decades, Aljabre (2012) suggested that a vital role can be established with the various organizations due to the rise of such technology.

In conclusion, the literature has demonstrated the importance and impact of transitioning to cloud computing technology. However, the reviewed literature has also highlighted limitations, specifically in regard to the service lines within cloud computing vendors. The focus of the literature has primarily been on technology-related aspects, rather than the services required to implement the technology.

2.3.2 Cloud Computing Advantages

Stratopoulos and Dehning (2000) studied the relationship between investments in technology and financial productivity and found that an organization can have a better financial performance if they have better technology advantages and implemented successfully, the opposite is also true, in which an organization can have what they called as a productivity paradox in case they have an ineffective implementation of their information technology projects, in which technology investments could be perceived as negative due to failures in implementations. Etro (2009) viewed such advantages from a different angle, which is the fixed costs reduction in information technology consumption, which can result in establishing an important role for the businesses as well as the competition. Marston et al. (2011) also suggested that large organizations could benefit from such technology to asset them in building-wide information system policies.

Bhattacharya and Upadhyay (2018) discussed a cloud computing technology model to maximize the organization profits, which can help clients to generate new revenue streams by building their shared services environment and providing such shared services to clients at a reasonable price. For instance, if a company has a group of subsidiaries, an information technology department can implement the cloud computing environment, which these subsidiaries will use, and each subsidiary can pay its usage of computing. Vithayathil (2017) studied the impact of cloud computing technology as a new experience on the internal information technology teams in an organization and found that such a rise in cloud computing technology gave a new experience in which the control became more toward the employees of business roles rather than the information technology employees as the company can outsource the entire information technology requirements to cloud computing vendors. Also, these vendors can provide many mature solutions, better than the information technology department since they have their research and development departments.

Vithayathil (2017) also mentioned that cloud computing vendors assisted in resolving the complexity of the IT systems. Hence, the employees with business roles can focus more on what can help them to do their business better, which in turn has created a threat to some information technology employees. Such research opened the door to vendors to reconsider what kind of messages to change in the value positioning to adapt with such new experiences from one side while having cloud computing as a way to improve operational efficiency as it allows to reduce hardware costs, as well as, technology costs to maintain such hardware, as well as, it allowed reducing the time to operate, which allowed having faster deployments for cloud computing solutions.

In conclusion, there are many advantages of cloud computing technology for service lines to consider. However, the limitations of the literature, mainly in Vithayathil (2017) as well as Bhattacharya and Upadhyay (2018), are how service lines can take advantage of cloud evolution, particularly in regards to how to impact the decision-making process on the client side to increase cloud computing value-based selling service catalogue.

2.3.3 Market Dynamics – Experience Economy & COVID-19 Pandemic

The term "experience economy" has become commonplace over the last two decades, especially with the rise of the internet and social media (Cong and Li, 2023). Companies are now evaluating the client experience in relation to purchasing behaviour. As Pedersen, Slavich, and Khaire (2020) note, customer decision-making is not affected by the product or service directly; technology and creativity have acted as the driving forces that have caused recent economic changes and the development of the experience economy. A remarkable moment or event that engages with consumers by soliciting their participation or through some other connection can affect decision-making. As Cong and Li (2023) note, charging customers to impact sales decision-making is a change from the typical sales model; for example, when purchasing products online, prospective customers rely on consumer experience notes and customer feedback rankings.

As cloud vendors must change their sales positioning and messages in response to the new experience economy, they might also need to change their employees and define new roles. As Mariana et al. (2013) discuss, firms may find this challenging and may encounter resistance in this endeavour. People do not like frequent changes regardless of the knowledge they might gain due to the changes.

Nicola et al. (2020) analyze the socio-economic implications of the COVID-19 pandemic, which began at the end of 2019. They mention that it increased the fear of a global economic crisis and recession that could affect many sectors, such as airlines, education, construction, and commodities. The authors posit that the pandemic resulted in widespread job loss, while many others were forced to implement remote work strategies, performing their jobs from their homes. Alashhab et al. (2021) mention that the COVID-19 pandemic increased the dependency on cloud computing technology; building the cloud computing infrastructure required to facilitate work-from-home arrangements was necessary. Furthermore, the pandemic also increased the demand for hardware resources to establish the infrastructure required for remote access and avail different digital communication channels.

In conclusion, the experience economy and the COVID-19 pandemic are considerable when planning the framework for achieving operational efficiency. Both can impact the sales decision-making process and help identify priorities for the service line to focus on. There is a lack of understanding of their impact on the Middle East market due to limited research specifically in cloud computing vendor service lines.

2.4 Importance of Service Line Operational Efficiency

This section illustrates the impact of service lines on the operational efficiency of a cloud computing vendor in cloud computing growth, and what needs to be considered to avoid the efficiency paradox, which is the differences in expectations between shareholders and stakeholders.

2.4.1 Cloud Consumption Growth

Cusumano (2008) highlights a disruption in the software industry. In the past, the software industry used to obtain revenues from product sales and license fees. Now, these firms obtain earnings from service offerings such as annual support fees and extended value-based evolving services such as upgrade and technical support. Cusumano (2008) notes that service lines can drive the growth of the software industry in the long term. Boillat and Legner (2013) discuss how cloud computing technology has led software vendors to focus more on the importance of end-user services. This has obligated these vendors to think more deeply about the value-creation logic they rely on and how to develop the competencies that support the hosting and management of their mission-critical systems.

Stuckenberg, Fielt, and Loser (2011) posit that the transformation towards cloud computing technology has impacted client firms’ existing business models. In turn, this has affected cloud computing firms’ relationships with their clients that resulted in a positive key partnership with software vendors. Hence, cloud vendors' service line departments have become an important pillar as they play a role in newly transformed business models. Werner and Moormann (2009) examine the relationship between efficiency and profitability in the financial sector of five large economies in the European Union. They found that profitable banks exhibited greater technical efficiency than their competitors.

Wang, Wang and Chen (2019) argued the factors that can impact cloud computing consumption and adoption and found that the availability of wide cloud product services, and quality of customer services are key factors toward driving cloud consumption growth. Also, the analysis of perceived services such as amount of costs savings and improved scalability could be reasons to accelerate consumption growth.

In conclusion, Wang, Wang and Chen (2019) work showed the impact of the customer service quality as well as the impactful value of a service on growing the cloud computing consumption. However, the research had a limitation on the market that the research is conducted in, the Middle East countries.

2.4.2 Achieving Shareholders' Objectives & Avoiding Efficiency Paradox

Operational efficiency is impacted by the expectations of shareholders and the practices of stakeholders. Goodpaster (1991) defines shareholders as entities that are equity owners and stakeholders, including employees, partners, customers, suppliers, government entities, and communities. Mitroff (1983) shows that organizational management stakeholder theory is linked with business ethics in various ways, including through business values and morals, which affect the way that organizations are managed. Shareholders seek higher revenues at lower costs; under certain circumstances, that might cause business ethics problems, such as in cases where high expectations are at odds with business realities that encourage some employees to engage in improper practices to satisfy shareholder needs. Under pressure to increase revenues, some firms might behave unethically to justify growth opportunities. Goodpaster (1991), in analyzing this paradox, posits that it is due to a dominant culture in business whereby stockholders work to maximize organizational revenues, which in turn may conflict with stakeholders' interests on many occasions.

In the researcher's view, if a firm's revenues are less than or similar to its costs, this can create an efficiency paradox that can affect the stability of the firm's employees and their ability to perform and innovate. For specific roles in organizations, job stability is a key consideration. As Mahmood (2020) notes, senior management officials tend to reduce costs to improve efficiency by reducing the size of their workforces, which can put an organization in a better competitive position and improve its financial performance. However, affected employees might view this action by top management as being unfair, as causing them social challenges, and as an outcome of management's failure to utilize its human power in the best and most effective way. Senior management might view such a process as one that improves business outcomes. But such actions might impact innovation, as Wang (2021) notes, the feelings of job instability can affect the ability of employees to innovate and perform at their very best. The COVID-19 pandemic worsened this sense of insecurity and instability among employees, negatively impacting their work (Nemteanu, Dinu and Dabija, 2021). However, the study has a limitation in that the survey was conducted in Romania, which limits the geographical scope of the research.

As conclusion, operational efficiency can be negatively impacted by the objectives of shareholders. Service line leaders need to differentiate between shareholders' objectives and shareholders' needs in a way that retains the employee's ability to outperform and innovate. Understanding employee outperformance compared to the service line strategy and set objectives, can be a future research idea.

2.5 Achieving Operational Efficiency

This section outlines the factors that affect the achievement of operational efficiency of a service line in a cloud computing vendor. There are factors that serve as reliable performance indicators, such as selling reusable service assets, which are technology programs that have been developed and can be re-used by different customers due to common features that are in demand to customer needs. Weinman (2011) notes, that service departments get their revenue by selling the employee experience measured in time, for instance, a client might need an employee for 10 days, and customer pays the cost of these days, hence as author mentioned, time is money. Wenzel (2018) notes that software industry earn service revenues from their time-efforts to deliver services based on their experienced resources, which influences the customer experience and helps customers realize the value of the services (Brodie, 2009).

Frei (2008) argues that the four things that any service business must do it right; these are operational efficiency, customer intimacy, product leadership, and mass customization [providing a competitive price of the service]. And, to achieve that, he discusses four important pillars that service organizations must account for to achieve desired business results, these are employees, customers, business processes and financial funding. He discusses the importance of attracting employees with the right skills to influence customer behaviour positively. Furthermore, Frei (2008) also mentioned that maintaining efficiency has a cost for ensuring business outcomes. Such costs can be reduced if some activities are transferred to customers. Hence customer upskilling, adaption, and enablement of customers are considered part of an organization's customer focus plan.

My view, Frei (2008) model is important as three of the four pillars mentioned are what exit today in the service strategy of the service line, these are the employees, customers, and business processes. The difference is mainly in what Frei (2008) mentioned as the fourth pillar, which is the financial funding, which is considered in the service line now as a performance indicator, named as Services-Sales booking indicator. The service line has today sustainability as the fourth service line strategic pillar. It can be understood why Frei (2008) did not consider sustainability at the time he published his article 2008 as sustainability became an area of importance just in recent years due to the growing environmental impact of cloud computing data centers and increased awareness of the social and economic impacts of cloud computing technology evolution (Subramani and Sivapalan, 2018).

The following subsections illustrate more on these four pillars in relation to achieving operational efficiency; these are employees, customers, business process, and sustainability.

2.5.1 Employees

This subsection illustrates various employee-related factors impacting performance, such as business objectives, performance reviews, team cohesiveness, diversity, and lifelong learning.

Smith (2022) notes that employee talent is key to maintaining an organization’s competitive advantage and continued viability. The author suggests that organizations should have transparent business objectives and performance reviews; this will help them retain talent, which can eliminate employee anxiety that might otherwise affect their performance and innovative efforts. Zahra, Liu, and Si (2022) discuss the importance of digital disruptors and technology pioneers, as these individuals can focus on market needs and can help technology have an impact with respect to such needs. The authors suggest that business leaders must enable these disruptors and pioneers, which serves as a method of attracting these talents.

Riisla et al. (2021) argue that team cohesiveness could be crucial in improving performance, encouraging innovation, and having an effective teamwork environment. However, the authors suggest that team leaders who focus on outcomes and disregard other aspects of cohesiveness and performance, such with respect to social, ethical, and environmental considerations, can cause their teams to develop unhealthy relationships and trust issues. This could lead to negative outcomes. The tension between a leader's focus on financial performance indicators and their focus on the well-being of their employees was addressed through a survey of leaders and their employees in companies based in the Netherlands. The balance between employees' well-being and performance indicators is an area of critical thinking to the company business.

Stashevsky and Koslowsky (2006) suggest that a group led by a transformational leader who encourages staff motivation is more likely to have excellent cohesion. Lencioni

(2012) offers a cohesive team model that is composed of five behaviours: trust, conflict, commitment, accountability, and results. The author describes trust as involving the establishment of an environment where team members can express their feelings or share opinions fearlessly. They elaborate that without trust, people waste their efforts thinking about others' intentions, preventing them from achieving their goals. When trust is established, people can speak freely; this allows for healthy debate and conflict, which is a significant aspect of moving forward in a relationship. When team members' voices are heard and their ideas are expressed and understood by other group members, they are more likely to commit to a given plan even if the chosen path does not reflect their desire. By establishing trust and respect, teammates can encourage and even challenge one another when their actions fall short of performance standards.

Dutta, Peng, and Choudhary (2013) study the diversity factors that might affect the process of migrating to cloud computing technology. They find that cultural diversity is one defined risk that may pose challenges in this process. In the researchers' view, cultural diversity can affect a company's competitive edge, especially with respect to employee recruitment, costs, innovation, sales and marketing, and creativity as well as problem-solving capabilities and quality of business outcomes. Vangen and Winchester (2014) refer to the culture paradox, which is the tendency of some employees to discriminate based on gender or preference for certain employee nationalities, which can affect collaboration in cases where there is a workplace culture of distrust among employees. The authors limited the research work to collect data from six collaborative projects that can have potential cultural diversity, but without specifying which cultures were addressed and if Middle East culture were considered. In the researcher's view, culture paradox is important due to the fact that employees in the service line come from various cultures and nationalities.

Milosevic (2016) discusses the challenges that many virtual organizations face during the process of migrating to the cloud, including issues relating to knowledge creation and collaboration. The authors found that there is a relation between collaboration, knowledge creation, and learning. To improve efficiency and reduce costs, they suggest that firms create new business models that are based on trust and deep commitment; and to encourage the culture change from cooperation (being asked to do what is asked to do) into collaboration (promotes the together culture).

Yang, Lee, and Cheng (2017) link operational efficiency with employee creativity. Further, they note that operational efficiency can be improved if employees are encouraged to outperform (targeting impactful business outcomes). Furthermore, firms can achieve operational efficiency by enabling employees through mandatory training and improving the employee experience. Such efforts can enhance a firm's operational efficiency. Hence, collaboration and learning will be key concepts in the design of business models in the future. Fischer (2000) explains that lifelong learning (self-motivating learning) is a dimension that will drive growth in business organizations in the future. The author notes it is a change in mindset and a habit that drives people to engage in self, organizational, and collaborative learning.

While Bauer (2018) argues the benefits of cloud computing technology to improve the operational efficiency of applications, he emphasizes the importance of having specialized skills for implementation. He mentions that the data used for research could be out of date, which presents a limitation. Additionally, the study addresses application efficiency, and not the efficiency related to the implementation service line and how to improve performance indicators.

In conclusion, employee outperformance affects the achievement of operational efficiency, and that can be impacted by many factors such as transparency in business objectives and performance reviews, maturity of team cohesiveness, diversity and avoidance of culture paradox, and lifelong learning. The literature has a limitation in understanding the impact of these factors in the countries of the action research implemented and in specifically a service line in a cloud computing vendor in these countries.

2.5.2 Customers

This section illustrates the impact of customers on achieving operational efficiency from various dimensions, including the customer's purchasing behaviour, net promoter score, customer adaption and role of change management, as well as the value-based technology offerings and role of innovation.

2.5.2.1 Purchasing Behavior

Accelerating decision-making processes on the customer side is crucial for the growth of business performance indicators. However, that may require shifting from organisational buying [buying decision is via purchasing department] to consumer buying behaviour [buying decision is via individuals]. This can be challenging while selling enterprise software and technology applications. Wenzel et al. (2012) note that centralized information technology and purchasing departments, which control organizational buying behaviour, can affect the purchasing process. Consequently, they suggest that firms create a buying centre that is composed of various roles such as the user, buyer, decider, and influencer.

Artificial intelligence can play a vital role in accelerating client decisions and the adoption of new technology as it can help build trust and confidence in the perceived business value of the technology. Wahab et al. (2020) discuss an artificial intelligence-based mechanism to build trust in decisions and recommendations that relate to new cloud computing solutions. Such a mechanism uses machine learning techniques that can provide reliable decision-making endorsements by analyzing collected information. The research shows the importance of artificial intelligence in the decision-making process surrounding cloud transformation and user adoption.

However, Wenzel et al. (2012) question whether physical interaction between software vendor sellers and customers is required due to the complexity of the purchasing process on the client side. Defining an enterprise software solution adds an additional layer of complexity. It requires that a vendor or service provider have employees who understand the solution's complexity and can also meet the needs of the various stakeholders engaged in the process. Many Middle Eastern clients in the financial services, government, public, and communications sectors still exhibit complex organizational buying behaviour. This requires in-person sales employees with solution experience capabilities to manage effectively the various stages of the procurement process, including in implementing sales tactics, engaging in procurement negotiations, and in convincing clients to adopt the cloud computing product.

Given the ongoing digital disruption and the increasing presence of younger stakeholders in decision-making roles, there are other factors one must consider. Ahmad and Hadi (2020) find that digitization has affected organizational buying behaviour; other factors have begun to play a role in the decision-making process, including factors that are related to the age of the decision-maker, their gender, and their level of qualifications. These can have a significant impact on the purchasing process. The authors argue that cloud vendors should consider age-related factors when designing product advertisements. Jayasimha and Nargundkar (2020) evaluate the impact of selling cloud applications on consumer behaviour. Their research results shows that the decision-making process is influenced by the type of stakeholders that manage the business industry or domain rather than those who manages the information technology departments, cloud computing vendors have to factor such impact when they plan their market positioning messages to target the right audience.

2.5.2.2 Net promoter score (NPS)

NPS is crucial to determine the customer's loyalty. Schneider et al. (2008) discuss the net promoter score (NPS), noting that it was introduced to the market in 2003. The goal of the NPS is to reduce the length of customer surveys that are used to determine whether they are willing to recommend a product or service; with the NPS, clients can only provide a single value from 0 to 10. A score of 9 or 10 is the best; the clients that give these scores are termed 'promoters', as they are the most willing to recommend and be loyal to the service or product. In contrast, those who give values from 0 to 6 are termed 'detractors', as they are not willing to use or recommend the product. Lastly, those who offer a score of 7 or 8 are termed 'neutrals'.

They may use the service or product but are otherwise not willing to recommend it. An NPS reflects customer loyalty and how the customer views the perceived service or product in terms of the willingness to continue doing business with the service provider in the future. Gadkari (2018) argues that there is a relationship between customer loyalty and industrial market dynamics. He illustrates that market conditions and customers' perceived business value of the services or products can affect such relationship. What is accepted as a customer valuable business impact in a certain geographical territory might not be accepted in another geographical territory. Moreover, customer perceptions of a service or a product may also vary. Thus, industry-specific factors influence NPS.

Baehre et al. (2022) suggest that firms can extend NPSs beyond just being a customer loyalty metric into a tool that they can use to predict customers' mindsets and future sales growth. The authors mention that it could also help firms understand the quality of their products and opportunities for future improvements. The authors note that NPS is widely used to measure customer satisfaction, but there is a lack of research on the relationship between NPS and predicting sales growth. This lack of research creates tension between the widespread use of NPS and the lack of evidence that it can assist in predicting sales growth. The research is limited by the fact that it only considered data from companies that are already using NPS, and only located in the United States and Europe. Spiess et al. (2014) suggest that the usage of big data as a technological solution can improve the customer experience, and can thus have an influence on NPSs and yield positive business results.

2.5.2.3 Customer Adaption & Role of Change Management

Lauer (2010) defines change management as a path to achieve goals. The author mentions that change management is a process to transform an organization from a current state into a future state. It is a complex process that can affect the individuals within a firm, as well as a firm's corporate structure and culture. Change management plays a crucial role in the decisions leading up to cloud transformations; these decisions can affect the success of cloud deployments. Those who fill the role of change agent in their organizations must possess advanced skills (Caldwell, 2003). Kingelin (2020) challenges the supposition that there is a relation between the change management process and customer retention in which cloud service providers can experience deaccelerated growth if they fail to factor in customer retention requirements. The author suggests seven business drivers that can affect a client's decision to continue subscribing to a cloud vendor’s products. These factors are the customer experience, overall returned benefits to customers, performance of technology, social influence, market economic considerations, hidden or passive behaviour, and switching barriers.

While Kingelin (2020) assessed the factors that impact customer retention with cloud computing vendors, the research did not address the impact that a service line can have on the retention process and change management to encourage cloud adoption. Furthermore, the research was limited and did not consider the countries included in the study.

2.5.2.4 Value-Based Technology Offerings & Role of Innovation

Willcocks and Lacity (2018) discuss the role of innovation in relation to cloud computing technology. They mention that investigating the service dimension in terms of outsourcing information technology poses information security and privacy risks. However, Weber et al. (2020) point out that innovation is essential for organizations to maintain their competitive advantage. Lakshmi, Sricharan, and Vijayakumar (2020) note that technological advances have proven to offer great advantages, such as improving operational efficiency and the client experience. The authors review the impact technology has had in respect of the shared-services architecture business model, finding that technology is a gamechanger in improving operational efficiency. They argue that this is due to the utilization of robotics, machine learning, and process automation, which has helped in leveraging firms' competitive advantages as well as handling efficiently the changing dynamics of customer needs.

Buhalis and Yen (2020) mention that chatbot solutions can improve customer behaviour in the hospitality business as a new machine learning technology. In their research, the authors argue that such technology plays an essential role in enhancing the client experience positively, which assists in overcoming many existing challenges, how the research had a limitation to the hospitality industry only. Estrada and Dong (2020) discuss the relationship between technological investment, competition, and operational efficiency. They found that technological advances can facilitate improved collaboration between competitors, resulting in mutual benefits for all parties, leading to improved performance and revenue growth.

Wenzel (2018) refers to the acronym, XaaS (which stands for 'Everything-as-a-Service'), which is a way that businesses can outsource their lines of business (e.g. the information technology department) completely or partially. Classen et al. (2019) mention that software vendors have successfully transformed customers from non-cloud computing applications to cloud computing applications, which is a strategic move. Still, they miss that XaaS can generate new revenue streams, which is an essential layer in the transformation path. Tanque (2019) mentions that

XaaS is an emerging cloud service model that cloud vendors can position based on business processes and technology-based services. Wenzel (2018) did not address the impact of service lines that service leaders must factor in to promote the success of XaaS services.

Hung (2019) notes that XaaS is a new and innovative concept that arose with cloud computing and the Internet of Things (IoT), which is physical objects embedded with sensors and processing ability that can allow exchanging data between these objects, and aiming to automate business processes through computer networks.

Li, Biennier, and Amghar (2012) study Business-as-a-Service (BaaS) as a developed business stream with the evolution of the cloud computing technology. They argue that BaaS could offer many benefits for industrial enterprises, however, BaaS can support firms in addressing existing challenges with respect to both information technology and business units on the client side. Radu et al. (2014) argue that BaaS could have various artificial intelligence-based use cases. For instance, it could serve as a decision-making system that benefits from technological advances.

O'Neil (2014) challenges the idea that cloud solutions, if they are available, can fully satisfy the needs and requirements of all business users and information technology employees. He discusses replacing an information technology department by offering information technology as a service (IT-as-a-Service (ITaaS)), which is having all technology resources packaged together with full automation of the business processes via a complete solution-in-a-box. This could allow global cloud vendors and service suppliers to offer a complete solution in a box..

As a researcher view, many cloud vendors are still in the process of building their cloud application solutions while they are simultaneously working to maintain product and service maturity levels. Hence, it may be too early to evaluate the viability of the solution-in-a-box model due to the limitations of industrial cloud solutions and the solution maturity challenges.

In summary, customer factors can affect the efficiency of cloud computing vendor service lines in the Middle East region, but there is limited literature on how these factors can impact the customer decision-making process in the Middle Eastern region, and what service line leaders should consider when developing their strategy and execution plans.

2.5.3 Business Processes

This section outlines the impact of business process re-engineering on achieving operational efficiency.

In choosing value-based solutions, clients seek fast results at a low cost. However, it may be challenging for cloud service providers to meet such expectations if business processes are complex and lack agility. Hammer and Steven (2004) link firm performance and efficiency with innovation. They mention that the secret to improving a firm's performance and efficiency is operational innovation, which can help companies perform better. The authors suggest focusing on re-engineering high-impact processes that can impact business results.

Chen et al. (2014) argue that the agility of information technology business processes can affect organizational performance. However, they note that a lack of understanding of the business environment affects one's ability to define the gains that can be achieved. Troise et al. (2022) define organizational agility as the ability to respond quickly to or anticipate external market requests or changes, which is crucial to dealing with hypercompetitive business environments. The authors argue that agility can affect a company's financial, process innovation, and product innovation performance, however, the study has a limitation as it focuses on the use of agility in the manufacturing sector and not the services industry.

In the researcher's view, the growth of revenues cannot happen without the growth of services-sales. Hence the following subsections illustrate the impact on sales process via technological advances.

2.5.3.1 Sales Process Automation via Enterprise Online Portals

Wenzel et al. (2012) argue if consumer sales portals can be replicated efficiently by cloud computing vendors to sell their enterprise services or not. The study was done on the SAP (software cloud computing vendor name) online store – that used to sell enterprise resource planning (ERP) and human capital management (HCM) applications. They mention that such stores help clients evaluate the right solutions to use.

However, the authors suggest that using portal initiatives to sell enterprise applications is still an emerging trend; to assess the impact on consumer behaviour, especially given the complexity of software applications, more studies are required. The study shows that selling products through an online sales portal can lead to a growth in sales. Furthermore, although this sales mechanism is still new, it shows promise in optimizing human costs that are typically involved in selling cloud services applications.

Wenzel (2018) extends the research on SAP online stores by expanding the mobility-channel (accessing via mobile phones and tablets) as a sales channel. The author suggests that such a system assists in the marketing process of distributing new enterprise applications. However, the research has one limitation; only a relatively small number of client firms were engaged in the research, and thus more research is required. Wenzel et al. (2012) suggest that the success of online channels depends on identifying the consumer behaviour patterns that promote organizational consultative selling via online channels. Hence, there is a relation between the stakeholders' consumer behaviours and online proposed patterns, to understand how online sales portal can influence the decision-making process.

The authors mention another factor: cloud computing vendors should limit selling complex software-solution with various modules to implement, and instead they should offer less complex products instead. The authors question the possibility of replacing the lengthy procurement process, which is characterized by existing sales patterns among many organizations, by allowing clients to purchase products online via corporate credit cards or departmental cost centres. This approach can avoid the lengthy procurement process involved in approving an expenditure from an organization's central IT budget.

Wenzel (2018) examines the use of the application store concept in selling enterprise products; however, the results did not provide any empirical data to support the argument about the potential impact of the app store model on the enterprise software procurement and deployment, and what would be the impact on a service line performance according to such model.

Muhammad, Stantchev, and Aranda (2020) note the contractual complexity clients face in moving from non-cloud to cloud-based products. They suggest clients typically must accept vendor terms and conditions. This might jeopardize cloud service firms' relationships with current clients, as some of these contracts might allow governments to access client data depending on the country that the cloud vendor is based. Despite that, the study showed an improvement in time to contract especially for customer relationship management application, but it had limitations to understand the impact on other type of applications and technology solutions.

2.5.3.2 Sales Process Automation via Consumer Buying Agents

Wenzel et al. (2012) divide the customer buying process into several phases: problem definition, the foundation of specifications, searching for information, evaluation, and procurement. The authors mention the importance of autonomous buying agents in the retail industry. This is a new area of study in the enterprise software cloud business that could play a vital role in each stage of the enterprise purchasing process.

Weber et al. (2020) investigate the role of autonomous consumer buying agents by studying 23 cases. They suggest that both customers and businesses can use these agents. They can support the decision-making process by providing comparative views on various products or services on the market. The authors' work leverages a former view of traditional software automated-bots (a software application that provides answers to the users) that were used to compare different product offers and suggest decision-making recommendations. Such automated bots can complete portions (or the entirety) of the purchasing process. The authors note that the understanding of business models that require consumer buying agents is limited.

In their work, Weber et al. (2020) discuss four essential components of the consumer buying agents business model. These components are the customer segment (the 'who'), the value proposition (the 'what'), the value chain (the 'how'), and the profit mechanism (the 'why'). They show that software agents can add value by automating the purchasing process or brokering the best-fit offer. The results suggest that complete automation of low-risk purchases is feasible. However, it can be challenging to measure intangible consultative selling.

As conclusion, business process re-engineering can improve operational efficiency. However, there is limited literature to understand its impact on service lines in cloud computing vendors, specifically in a region like the Middle East. Additionally, potential research ideas exist to understand the impact of technologically advanced tools, such as automated bots, on a service line operational efficiency in a cloud computing vendor.

2.5.4 Sustainability

Kumar and Vidhyalakshmi (2012) mention that modern organizations face challenges due to information technology automation. This automation results in excessive energy usage, affecting global and local environments. The authors posit that cloud computing can be a business sustainability solution, as it can protect people, the planet, and organizational profits. The authors suggest that cloud computing can help organizations make their business processes more agile, reducing their costs and assisting them in enhancing their operational efficiency.

Sriram (2022) discusses the sustainability challenges that cloud computing vendors have. These firms need to develop sustainable solutions that protect the planet, as their data centres consume significant amounts of energy; hence there is an immediate need for these firms to switch to clean and green energy solutions. The author argues that the cloud computing industry could benefit from green recovery efforts if firms within the industry offer green cloud computing. Sustainability can offer new technology use cases a point of business entry as Jiang, Song, and Yu (2022) note. Additionally, blockchain technology can play a vital role in helping carbon trading companies calculate their carbon emissions more transparently. This technology can thus make it easier to track certain problems, such as missing accounting entries and double counting. The authors suggest blockchain technology could be used in areas like energy finance, shared energy storage, and carbon emissions trading.

As Alam, Tajammul, and Gupta (2022) note, governments have begun to focus on so-called 'smart cities', which depend on cloud computing technology, the IoT, and artificial intelligence. The authors note that this requires complete interconnectedness between electronic assets and devices, which can result in many as possible integration points. Sustainability can affect operational efficiency, as Tsai, Lai, and Hsieh (2022) note. The authors discuss the importance of stakeholder awareness of the factors that can help them leverage their companies' competitive edge in the realm of sustainability. Technology vendors can benefit from sustainability; Chang, Wills, and De Roure (2010) mention that organizations can invest as long as there is a suitable cloud computing business model. Governments, business leaders, and other stakeholders have been discussing the green recovery of the planet and sustainability policies (Yu et al., 2022). However, such efforts require complete cooperation between cloud computing service providers and customers (Rizki and Augustine, 2022) if they are to have an impact.

Groysberg, Kelly, and MacDonald (2011) mention that sustainability is one of the most rapidly growing areas that c-suite stakeholders must be aware of. Furthermore, these stakeholders can create a value impact to the environment by constructing, sharing, and executing sustainability strategies within supply chain processes. However, such efforts require organizational transparency between employees and managers. Berger et al. (2022) discuss the willingness-to-pay concept, specifically examining individuals' decisions to purchase carbon dioxide offsets. Importantly, such studies are still of limited application, since there is little knowledge on their external validity, and it is yet unclear whether these studies might apply to software enterprise vendors.

Organizations can take immediate steps to meet their sustainability targets. Rosen (2017) discusses the environmental impact of business-related air travel, such as attending conferences and face-to-face meetings. The author found that air travel for business has a substantial impact on climate change due to the large amount of carbon dioxide emissions such travel generates. The author mentions that organizations can immediately reduce their emissions by transitioning in-person meetings to virtual meetings where possible.

Jarvenpaa and Mao (2008) note that effective mediated offshore services can be used to improve operational efficiency by optimizing service delivery costs. They found that for this model, the key challenges are in identifying the right talents to work remotely and being able to train and upskill them effectively so that they have the capabilities needed to meet customer demand.

In conclusion, sustainability must be understood and considered during the creation of strategy and execution frameworks. As a researcher's view, there can be a link between sustainability requirements and the COVID-19 pandemic requirements to reduce dependency on physical meetings (Rosen, 2017), which can give an advantage to the service line remote center to increase dependency on it.

2.6 Key Organizational Disciplines/Concepts Underpinning Action Research

This section outlines the key organizational disciplines/concepts that were considered for validation in the study, by examining their practical applicability based on the study findings. The organizational disciplines/concepts were carefully selected to provide insights into what affects operational efficiency in a service line of a cloud computing vendor. When a 'theory' is mentioned, it refers to understanding the theory's concepts and its related organizational discipline.

Throughout the study, these organizational disciplines/concepts guided the data collection and analysis processes, providing a framework for interpreting the results. In section 7.2.4, the contribution of the study to theory and practice is discussed. The importance of utilizing organizational theory to enhance operational efficiency is significant, as it provides a comprehensive understanding to addressing complex issues related to organizational dynamics such as change management, employee motivation and engagement, communication impact, organizational culture and identity, team collaboration and learning (Cunliffe, 2011). In this study, various organizational disciplines/concepts were examined in detail, as depicted in Figure 2.1, to identify relevant insights and explore applicability to practice. Figure 2.1 illustrates the underpinning organizational disciplines/concepts and their relationships, progressing from back office related such as organization, human resources, culture impact and employee motivation, toward front office related that impact the service line clients such as business process re-engineering, decision-making, marketing and sustainability impact.

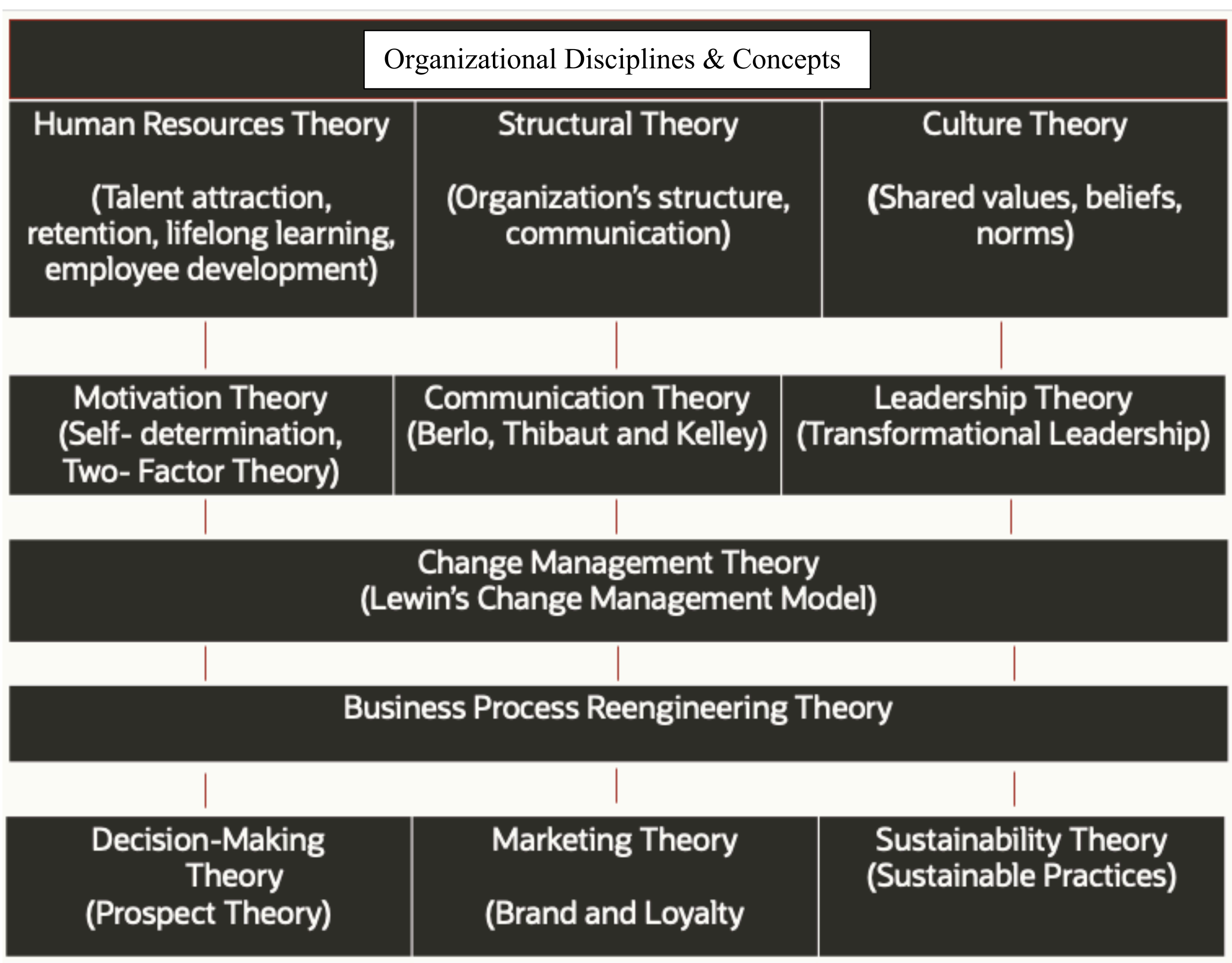

Figure 2.1: Study's Theoretical Framework – Organizational Concepts/Disciplines

First, the cultural theory, human resources theory, and structural theory were considered as the significance of each theory lies in its capacity to specific aspects of organizational behavior, which contributes to improving efficiency (Alvesson, 2012). The cultural theory sheds light on the role of shared values and beliefs in driving employee performance, as illustrated through the exploration of digital disruptors and lifelong learning (Schein, 2010). This theoretical lens informed the data collection process by helping to identify aspects of organizational culture that promote the adoption of team cohesiveness, fostering innovations and encouraging continuous learning.

The human resources theory highlights the significance of organizational policies and practices in promoting employee development and satisfaction, as evidenced in the areas of talent acquisition, talent learning, and talent retention (Beer et al., 1984). This guided the data collection approach by emphasizing the need to investigate the organization's ability to attract, develop, and retain talents. The structural theory serves as a foundation for understanding the influence of organizational structure design through business objectives and employee impact (Mintzberg, 1980). This theory informed the data collection and analysis by directing attention to employee's role in the service line, for instance, the role of engagement manager.

The research findings emphasized the importance and applicability of each theory, the results showed the importance of having foundation actions for success as a service line working culture impact, the importance of the engagement management role as part of the service line structure, and the importance to attract talents and focus on employee aspirations and learning plans. In the context of a service line within an organization, these organizational disciplines/concepts can be considered as the backbone that supports and influences its performance. The interaction of culture, human resources, and structure can determine how well a service line can adapt to changes, meets its objectives and innovates.

Second, the motivation theory, as highlighted by Deci and Ryan (1985) in their self-determination theory, is relevant to the findings of this study. Deci and Ryan emphasized the importance of internal motivation and employee satisfaction with basic psychological needs in driving organizational performance (Gagné, 2014). These needs include autonomy, competence, and relatedness. Autonomy refers to the employee's sense of control and freedom in making choices, while competence refers to the feeling of being effective and skilled in doing tasks. Relatedness refers to the employee's need for connection and belonging with others.

Gagné (2014) developed a model based on the Two-Factor Theory of motivation, developed by Herzberg, Mausner, and Snyderman (1959), to influence job satisfaction and dissatisfaction. The theory suggests two types of factors that affect employee motivation and satisfaction: hygiene factors and motivators. Hygiene factors are related to the work environment, such as salary, working conditions, and job security. Failing to meet such factors can lead to employee dissatisfaction, while motivators are related to the work itself, such as recognition and opportunities for growth. Fulfilling motivators can lead to more motivation and satisfaction.

The motivation theory guided the study's examination of how the service line effectively managed and motivated its employees, and how employee behavior and performance were affected by factors such as recognition, talent attraction tools, team cohesiveness, and career aspirations. The interview protocols were designed to include open-ended questions and prompts such as talent retention, lifelong learning, and collaboration, to allow stakeholders to express their perspectives on the focus areas and what needed to be done to achieve operational efficiency. The study's findings showed that optimizing employee motivation and engagement by addressing their basic psychological needs and using motivators can promote a positive work environment, encourage autonomy, competence, and relatedness, and improve operational efficiency.

Third, is the communication theory, as highlighted by Berlo (1960) and Thibaut and Kelley (1959), was crucial in understanding how communication can impact operational efficiency (Keyton, 2017). Berlo (1960) emphasized the importance of clear communication in minimizing misunderstandings, aligning goals, and promoting collaboration to positively impact organizational performance. Thibaut and Kelley (1959) proposed the Social Exchange Theory, which highlights the role of communication in promoting positive relationships and establishing trust between team members and leaders, leading to cohesive teamwork and cooperation that can impact organizational performance. The findings of the study emphasize the significance of building a cohesive working culture and setting clear goals and objectives to ensure the alignment of strategy and execution framework, guided by the communication theory as a theoretical framework. To examine this, the interview protocols were designed to assess collaboration and employee impact that revealed the communication challenges and their impact, allowing stakeholders to express their perspectives on these areas and identify actions needed to improve communication and collaboration for achieving operational efficiency.

Fourth, is the role of change management theory, particularly Lewin's Change Management Model, which was essential in addressing the challenges faced by service line leaders to implementing recommended actions and ensuring their effectiveness. As highlighted by Hayes (2022), the theory focuses on how to effectively implement a change in the organization, which was crucial in the work related to cycle 3 for the action research. Lewin's Change Management Model provides a structured framework for managing organizational change through three stages: unfreezing, changing, and refreezing. The results of the action research emphasized the importance of the unfreezing phase, where the engagement of stakeholders prepared the service line for change by promoting awareness and willingness to accept the transformation. The three cycles of action research identified processes to be defined or modified, setting the foundation for the changing stage of Lewin's model. By focusing on the unfreezing phase and providing a framework for the changing stage, the action research addresses implementation challenges and proposes mitigation strategies, effectively linking it to Lewin's Change Management Model.

The interview protocols were designed to focus on change management practices, including questions such as "Tell me your opinion about how to take the action into implementation", "Who should be the owner of executing this action ", and "What should be the frequency of implementation of the action", to allow stakeholders to express their perspectives on the implementation of recommended actions and identify actions needed to ensure their effectiveness. These questions were supported by prompts such as validating actions taken into implementation against which category of employee, customer, business process, and sustainability, and also verifying if the action is within the execution authority of the service line.

Fifth, the examination of customer needs and expectations was guided by the Business Process Reengineering theory introduced by Hammer and Champy (1993). The theory proposes redesigning business processes to cater to customer needs and expectations, which can lead to better customer satisfaction and loyalty. The findings of the study support the applicability of the theory in achieving customer-centricity, as demonstrated by the introduction of a new process to measure the net promoter score as a loyalty index. The theory guided the data collection and analysis by focusing on customer needs and expectations and their alignment with business processes, which helped to identify areas for improvement in the service line. The decision-making theory, specifically Prospect Theory developed by Kahneman and Tversky (1979), was also essential to understand how to influence the client decision-makers and grow the services-sales role (Adair, 2022). By analyzing the relationship between the net promoter score and decision-making under uncertain conditions, the findings allowed to have a deeper understanding of how customer perceptions of their experiences influence their future decisions and ultimately impact the service line performance. The interview protocols were designed to examine customer purchasing behaviour, client value realization, client satisfaction, and net promoter score, which allowed stakeholders to express their perspectives on these areas and identify actions needed to improve customer-centricity and achieve operational efficiency.

Sixth, the leadership theory is important for the service line leaders and mid-management layer to drive the execution of the service line strategy. The defined workplace problem acknowledges that the service line performance was not in line with the efficiency measures since the margins were declining, which requires transformational leaders to drive the strategy execution into success (Northouse, 2021). The defined business problem challenged the execution efficiency by the leaders on how to influence the service line performance indicators in a positive and growing manner. The research findings are consistent with the transformational leadership theory (Bass and Riggio, 2006), which describes transformational leadership as characterized by leaders who are able to inspire and motivate followers to exceed their own expectations and achieve exceptional organizational performance. The results demonstrated an execution framework that includes implementation challenges and mitigations, suggesting that transformational leaders play a crucial role in driving the execution plan to positively influence the service line performance indicators and set a foundation for success as a working culture within the service line.

Lastly, the Marketing theory and Sustainability theory are both relevant to improving operational efficiency. The marketing theory emphasizes the importance of developing a strong brand identity to attract and retain customers, this leads to increased positive word-of-mouth and customer loyalty, which can ultimately impact organizational performance (Liu, 2022). On the other hand, sustainability theory emphasizes the importance of adopting sustainable practices in business processes which can help reduce carbon emissions and environmental impact while also reducing costs (Lacity and Willcocks, 2013).

In the context of workplace problem, each theory is important for improving operational efficiency. The study's findings demonstrate the relevance of both marketing and sustainability theories to organizational performance in the cloud computing industry. The data collection and analysis were guided by theoretical frameworks, with interview protocols designed to explore topics related to branding, sustainability, and low-cost versus high-impact practices. The findings highlight the importance of developing a strong brand identity and adopting sustainable practices, such as utilizing remote centers for service delivery, to improve operational efficiency in the cloud computing industry. Sustainability can be one of the brand values of the service line.

The literature review highlights the significance of cloud computing as a rapidly growing technology that can provide organizations with opportunities to increase revenue and explore new business models. The rise of the experience economy, combined with the impact of the COVID-19 pandemic, has further accelerated the importance of cloud computing. Despite its potential, the literature review identified a gap in the understanding and implementation of a framework to achieve operational efficiency in the service line of a cloud computing vendor in the Middle East region. The identified service line focuses on the transformation of non-cloud information systems into cloud-based technology for clients. This gap provides an opportunity for research to validate underpinning organizational disciplines/concepts and design a framework that can guide service line executives to achieve operational efficiency and contribute to the practice.

The next section illustrates the impact of the literature review on research methodology.

2.7 Impact of Literature Review on Research Methodology

The literature review significantly influenced the research methodology for this project by offering insights into various methods employed in the reviewed studies. After examining the prior research by Frei (2008), Zahra, Liu, and Si (2022), Riisla et al. (2021), Lencioni (2012), Wenzel et al. (2012), Schneider et al. (2008), Wenzel (2018), Bhattacharya and Upadhyay (2018), and Vithayathil (2017), it was observed that the methods used in these studies included qualitative, quantitative, and mixed-methods approaches. However, none of the reviewed sources specifically utilized action research as their research method.

This thesis proposes a distinct framework for operational excellence, uniquely designed to fill gaps identified in existing literature. The use of a participatory and collaborative action research approach sets it apart, actively involving stakeholders in the research process. This approach facilitates the creation of an empowering environment and promotes a positive working environment and organisational change. Unlike previously reviewed studies on operational excellence in service lines within a cloud computing technology vendor, this research empowers stakeholders to co-create knowledge and define focused future recommended actions for achieving operational efficiency. The framework bridges the gap in the existing literature by providing a comprehensive action plan that connects various organisational disciplines and concepts. This plan addresses the practicability of examined concepts and disciplines, it includes detailed steps for how to take future recommended actions into implementation, anticipating and addressing potential challenges with suggested mitigations. Specifically, it addresses the lack of a unified framework in the literature that integrates requirements for operational efficiency, workplace culture enhancement, and understanding basis of maintaining business performance growth, particularly in the context of the geographical area and industry under study.

The literature review emphasized the need to execute such research using the action research method, with qualitative data as an approach. The reason for this was the lack of existing knowledge relevant to the research problem and the need to interact with people who understand the complexity of the business and what can affect service line performance. To achieve efficiency, sensitive financial information that would not be collected using surveys or structured interviews needed to be discussed. The various organizational disciplines/concepts proposed ideas for the researcher to validate with the participants, which required the researcher to assess the feelings and perceptions of the interviews to reach the right perspective of each contributor.

Drawing on the literature reviewed, the research questions emerged, focusing on (1) identifying the critical focus areas for achieving operational efficiency in a cloud computing company's service line, (2) determining necessary actions to improve the operational efficiency as future recommendations, and (3) defining the steps required to implement these actions while mitigating the anticipated expected challenges. The choice of action research as a methodological approach was made to better address the work-based issue, given its emphasis on context and collaboration.

The literature emphasized the importance of upholding ethical standards throughout the research process, which was integrated into the study's axiology. Reflexivity was also highlighted as an essential component for addressing the researcher's impact and possible biases, ensuring the research's quality.

The literature review informed the planned activities/interventions within the action research by offering insights into different concepts used in prior studies. Additionally, the literature review provided valuable context for the current study's objectives and facilitated the development of a research methodology that effectively addressed the research questions and generated effective outcomes.

In summary of section 2.7, the literature review informed the research methodology by emphasizing stakeholder involvement, ethical considerations, reflexivity, and the potential for positive change. While the reviewed sources did not explicitly use action research, their insights and findings contributed to the reasoning behind adopting an action research approach in the current study.

2.8 Summary

The literature review explores cloud computing's impact on organizational performance and highlights the importance of service lines within vendors, along with its relevant literature organizational disciplines/concepts. It also reveals gaps in academic and practitioner material, raising questions about focus areas and actions to achieve operational efficiency. Growth in the service line financial revenues, people headcounts, profit margins, cloud usage consumptions and reduction of costs are all indications of achieving operational efficiency of a service line in a cloud computing company, which can be affected by different business pillars such as employees, customers, business process agility, and business sustainability.

Although many articles argue each individual business pillar impact on organizational performance, however, the key conclusion is that there is a lack of knowledge to relate and link such business pillars in a holistic view of an organizational service line in relation with the key performance indicators. Understanding the business dynamics related to the growth due to the experience economy and the acceleration of digitalization due to the COVID-19 pandemic, and its impact to achieve operational efficiency are important to consider.

The study's aim and objectives are to create an action framework linking business performance indicators with business pillars, addressing efficiency paradox issues. The literature review having various concepts to examine, for instance, cloud computing's impact on organizational performance (Frei, 2008) provided insights into the potential benefits and challenges associated with adopting cloud computing solutions (Zahra et al., 2022). This informed the research question to identify critical focus areas for achieving operational efficiency. The sources discussing employee performance, customer relationships, and business process agility (Riisla et al., 2021) as well as (Lencioni, 2012), and also (Schneider et al., 2008) helped to understand the importance of these factors in achieving operational efficiency. This influenced a research question on what necessary actions to take to improve operational efficiency as a future recommendation. The literature on sustainability and its role in organizational performance (Wenzel et al., 2012) as well as (Wenzel, 2018) highlighted the need to define the steps required to implement these actions while mitigating expected challenges.

The research questions that emerge are:

1- What are the critical factors impacting operational efficiency in a cloud computing service line?
2- What actions address the efficiency paradox (costs higher than revenues) and enhance operational efficiency, as future recommendations?
3- How to take such recommended actions into implementation steps?

These research questions guide the empirical study, focusing on developing an action framework to address identified gaps and drive operational efficiency, considering current debates, contradictions, and differences in the literature. By connecting the reviewed studies to the specific work context, the research emphasizes the contextual aspects of knowledge and highlights the need for action research to address work-based issues.

These questions inform the action framework developed in the next chapters to link the service line performance indicators with the impacting business pillars, ensuring a holistic approach to achieving operational efficiency in a cloud computing company's service line. The following chapter presents the findings from the first cycle of the action research, along with a discussion of the outcomes.

3 Chapter 3 Methodology

3.1 Introduction

The primary aim of this research is to develop and produce practical knowledge that company leaders and executives can utilize to achieve operational efficiency within a service line of a cloud computing vendor. The workplace problem initially surfaced as a financial challenge, with declining margins resulting from costs exceeding the service line revenues. This prompted the identification of necessary changes to the service line working model in order to attain operational efficiency.

To address the research problem, this methodology chapter aims to answer specific research questions to achieve the research aim and objectives, which will be detailed in the following sections. The chosen methodology, action research, is particularly relevant for this study, as it allows a comprehensive understanding of the workplace problem and the development of actionable solutions.

The philosophical position of this research rooted in constructivist and constructionist epistemological stances, which emphasize the co-construction of the practical knowledge between the researcher and service line participants through their interactions and experiences. This approach allows obtaining the service line stakeholders' perspectives and assessing the working cultural impact. It also recognizes that knowledge is subjective, context-dependent, and can be socially constructed.

Qualitative data collection methods are employed in this project using semi-structured interviews. The choice of data collection methods is grounded in the selected research philosophy and action research methodology, focusing on generating actionable perspectives and promoting continuous improvement. Semi-structured interviews provide the opportunity for the service line participants to share their experiences, and construct a context-dependent understanding of the problem and potential solutions.

Data analysis through this research is thematic analysis using an inductive approach, in which patterns and emerged themes were identified through a close examination of collected data. This method is consistent with both the constructivist and constructionist epistemological stances, as it emphasizes the emergence of meaning from the data itself and it acknowledges the role of social context in shaping the understanding.

This chapter is organized into seven sections. In addition to the introduction and summary, it presents the research philosophy, stakeholders, setting and time horizon, research's role in terms of positionally, responsibility, duality, and reflexivity, data collection planning and method, data analysis procedures, quality evaluation of the study, as well as some challenges, and limitations encountered during the study. The methodology serves as the foundation for the research findings and conclusions presented in the next chapters.

3.2 Research Philosophy

This section outlines the research philosophy, explaining the research epistemology, research ontology, research type and research axiology.

3.2.1 Epistemology

McGrath (2020) defines epistemology as the study of knowledge and the ways in which it can be acquired. To identify the epistemological stance, the necessary questions were: what kind of knowledge is required to achieve this aim, and how can this knowledge be constructed? To elaborate further, it was necessary to understand the influential factors that can affect the achievement of operational efficiency in a service line. However, at the start of the research project, there were two thoughts to determine which philosophical perspective was suitable for the project: the constructivist or the constructionist perspective. Should the focus be on the cognitive information that exists within people's experiences (to understand their views and perceptions) or could it be related to cultural backgrounds, social relationships and how the service line employees interact with each other.

Creswell (2014) explains that constructivism emphasizes the idea that knowledge is constructed by individuals based on their experiences, perspectives, and interpretations of the world. Fisscher and de Vries (2019) argue that a constructivist approach can help organizations better understand and manage organizational change by actively engaging employees in knowledge construction. For me, as a researcher, this means working with service line participants to co-create knowledge and gain a deeper understanding based on their experiences, values, and interpretations of the service line strategy, processes, performance indicators, and other related business aspects of the service line's execution framework. To elaborate further, the declining margins of the service line suggested that costs were higher than revenues. This could be due to issues related to the service line's strategy, the quality of execution processes needed to achieve such a strategy, the quality of the actions performed to execute such defined processes or all of the above.

To find the root cause of the problem, it was necessary to discuss and brainstorm with experienced people within the service line to gain insight into their knowledge of the issue and to obtain their opinions on both the strategy and the quality of the execution processes. It was apparent that these discussions could be held with senior managers in the service line or individual contributors who are aware of the key challenges facing the service line.

Meanwhile, Gergen (2001) explains that the constructionist philosophical perspective emphasizes the idea that reality is constructed through social interactions and language. This perspective suggests that the researcher's role is to co-create knowledge with participants and stakeholders and to understand the social and cultural context in which knowledge is constructed (Charmaz, 2014). To elaborate further, the business problem might be due to cultural conflicts and the way employees in the service line communicate with each other. Do the service line employees behave in a culture of joint success, and what is the working culture that governs day-to-day people interactions? Additionally, it was apparent that this business problem has had a social impact on some people and has threatened their job stability. However, this alone does not explain the root cause of the problem.

The initial literature review at the beginning of the project could suggest implementing new concepts that can achieve operational efficiencies, such as the online marketplaces suggested by Wenzel (2018) and the idea of consumer buying agents (CBA) suggested by Weber et al. (2020). Hence, constructivist philosophical perspective is considered to obtain the perceptions and interpretations of the people involved regarding what is going wrong with the defined strategy or the execution processes. This could allow the construction of knowledge based on the majority opinions, perspectives and interpretations. However, at a later stage during the research project, specifically during the execution of cycle 2 (explained in Chapter 5), the views of the majority of participants suggested that the working culture is a key influential factor that affects the achievement of operational efficiency, and it establishes the foundation of success for the service line. For instance, the absence of team cohesiveness as working culture. Hence, the stance was a mixture of both the constructivist philosophical perspective and the constructionist philosophical perspective. Section 7.2.5 explains further the research results in relation to the methodology choices.

In summary, the decision was made to adopt both a constructivist and a constructionist epistemological stance to understand the opinions and interpretations of the engaged service line stakeholders, as well as the service line working culture's impact on achieving operational efficiency.

3.2.2 Ontology

This section explains the research's ontology. Ontology refers to the researcher's fundamental beliefs and assumptions (Creswell, 2014). Buchanan (2001) argued that ontology can help to define the nature of reality and the ways in which a researcher can perceive and understand that reality. For me, as a researcher, the assumption is that operational efficiency is not an absolute concept but could be subject to interpretation and negotiation among stakeholders in the service line (Tan and Olaore, 2022). It was apparent also to acknowledge that achieving operational efficiency involves not only technical solutions or new concepts related to service line strategy and execution processes but also social and cultural factors such as working culture and communication principles.

Another assumption, as a researcher, is that people are capable of reflecting on their experiences and are active agents in their social context, hence they can co-create knowledge through dialogue and collaboration (Cornish et al., 2023). Therefore, the decision was taken to adopt a participatory and collaborative action research approach, which aims to engage stakeholders in the research process via a qualitative approach to collect the required data, co-create knowledge using thematic analysis, and facilitate change, this is explained in detail in the subsequent sections.

In conclusion, the ontological stance informs the approach to this research, including the choice of research methods, data collection techniques, and data analysis procedures. The researcher's ontology emphasizes the importance of engaging stakeholders in the research process and co-creating knowledge to achieve a better understanding of operational efficiency in a cloud computing service line and facilitate meaningful change in the organization.

3.2.3 Participative/Collaborative Action Research

This section outlines the selection of the participative and collaborative action research method, along with the rationale for choosing it over other methods, as well as the challenges of using action research.

Selection of Participative & Collaborative Action Research

Coghlan (2019) asserts that organizations are artifacts created by human beings to serve their ends, which are shaped and influenced by human purposes through specific processes. Action research involves understanding the organization experientially via deliberate change processes. In this study, the choice to use a participatory and collaborative action research approach was driven by the need to achieve operational efficiencies within a service line in a cloud computing vendor. This approach aligns with the research's epistemological stance, which incorporates both constructivist and constructionist perspectives, as well as the defined ontology. By adopting these perspectives, the research acknowledges that knowledge and meaning are co-constructed through the interactions between the researchers and the company stakeholders. This selection also aligns with the defined axiology (detailed in the next section) that aims to establish a research environment that supports collaboration, empowers the company participants, and adheres to ethical standards.

To deal with the defined business problem, and generate knowledge required to answer the research questions, the project was planned in three steps. Each step aimed to answer one research question. First, was to define what areas to focus on to resolve the workplace problem. Second, was to define the required actions to resolve the business problem within each defined focus area, as future recommendations. And third, was about how to implement these recommended actions with an understanding of potential execution challenges and mitigations.

To achieve the research aim and objectives and find the suitable knowledge against the research questions, action research as a research type was selected. Geoffrey (2016) explained that action research is a systemic approach used to solve problems, especially if it is related to active involvement in the process of identifying and finding the solutions to the problem. It is suitable for business workplace problems, and as an approach, it involves collecting data, analysing data and reflecting, and implementing recommended actions for process change. The selection was based on various reasons. First, it is suitable to solve a specific organisation problem as mentioned by Geoffrey (2016). Second, the aim is to find out the relevant framework, as a working model, that can do a positive organizational development (OD) that can lead to achieving operational efficiency (Coghlan, 2019). OD is a systematic and planned process of change that aims at improving an organization's overall performance and effectiveness. OD focuses on enhancing collaboration, communication, and problem-solving skills among employees, as well as promoting a positive organizational culture that can support adaptability and innovation (Cummings and Worley, 2014).

Third, such a business problem requires data from employees that are aware of the service line details and performance indicators, and such data might be with limited access only to management staff or the finance partner of the service line. Hence, the research requires active participation by the researcher and company participants in a collaborative and transparent matter who might have the access to this level of information (Coghlan, 2019). Active participation includes the involvement of engaged stakeholders in various stages such as project planning, data collection, analysis, reflection, and action implementation (Coghlan, 2003). And finally, the research phasing approach requires proper planning of each phase and re-validation of opinions and thoughts after reflecting, with the active participants. Hence, the approach, as a strategy, is cyclic in terms of defining the aim of each phase to achieve the outcome, planning actions for the phase execution, implementing the actions, evaluating, and reflecting on potential improvement and adjustments (Coghlan and Brannick, 2014). The cyclic approach is suitable for the research philosophical stance, as it allows continuous improvement, active engagement of participants, and real-time adjustments, leading to a better understanding of problem-solving compared to case studies, which involve one-time static analysis (Kemmis & McTaggart, 2005).

Each of the three phases was considered as a cycle of action research, which is explained by Coghlan (2019). Each cycle has four steps - constructing action, planning action, taking action, and evaluating action. For instance, as part of the construction action, which includes the identification of the objective of each cycle, what to achieve after the cycle execution, the preparation of the interview protocol (interview protocols of the three cycles are detailed in Appendix B with an explanation of how research questions were designed), and the selection of relevant participants. While planning action step, includes the preparation of the interviews, the tools to be used, the required approvals to take the action, and the time planning to execute the action. Then for taking the action, the step includes the execution of data collection procedures, data analysis, and finding out the emergent themes. And finally, for evaluating action, the step includes the identified emergent themes in agreement or debates between participants and cyclic steps within the cycles to validate the interpretations and knowledge within the participants. Chapters 4-6 explain each of the action research cycles in detail.

Hence, the action research was designed in three cycles. The first cycle is to define the focus areas of the research, it was planned in a semi-structured format to collect the participants' views, experience, and in-depth information regarding how to progress on the business problem and what would be the research focus areas. The research was designed to progress in an emergent form with reflexive procedures to avoid the researcher's biases or influences. The researcher collected in-depth information from the participants and used prompts to obtain the interviewee's opinion if the participant did not discuss the related topic. Following the emergent approach, the inputs of cycle two were based on the outcome analysis of the first cycle.

The second cycle consisted of defining the recommended actions for mitigating the business problem for each of the interesting research areas defined in cycle one. The third cycle was then conducted to define how to implement the recommended actions and determined the obstacles that could oppose the implementation of these actions, with suggested mitigations of these challenges. Section 3.6 explains the time horizon of the project with detailed activities for each time period. The three cycles took on average 16 months; cycle 1 was five months, cycle 2 was six months, and cycle 3 was five months. Section 7.2 explains the evolution of actionable knowledge and recommendations per each research cycle.

Challenges in Using Action Research

This section highlights some of the challenges encountered when using action research. First, concerning my role and values as an insider, it was crucial to managing personal influence and bias. This is addressed in Section 3.4, which discusses my role and how I engaged in reflexive procedures. Second, the time-consuming nature of action research due to the need for repeated data analysis and validation with stakeholders to ensure accurate interpretations (Coghlan & Brannick, 2014). Third, balancing my practical job and research role poses a challenge (Coghlan, 2003), with mitigation strategies explained in subsequent sections. Lastly, generalizability is a concern, as action research focuses on specific contexts and business problems, potentially limiting the findings' generalizability (Stringer, 2013). Section 3.7 addresses the quality of research to ensure transferability.

In summary for section 3.2.3, the participatory/collective action research type was chosen for dealing with the workplace problem, and it allowed the generation of actionable knowledge in a collaborative and participative manner between the researcher and participants. The challenges of action research include managing insider bias, the time-consuming process, balancing practical and research roles, and ensuring the transferability of context-specific findings. The action research was planned to be executed in three cycles.

3.2.4 Axiology - Research Ethics, Integrity, and Reflexivity

This section outlines the research's axiology, which is the system of values and ethical considerations that can influence the design and implementation of the research. It addresses in detail the approach to collaboration, reflexivity, social change, empowerment, and ethical considerations (Reason & Bradbury, 2008). The following subsections further explain each of these components:

3.2.4.1 Collaboration

In this project, it was important to emphasize the importance of collaboration between the researcher and the company members (Kemmis and McTaggart (2005), noting that the knowledge and level of experience of the staff are essential for understanding the service line operational inefficiencies and identifying potential solutions for that. The basis of engagement with the participants is equal partners, promoting open communication and impactful participation throughout the research process.

3.2.4.2 Reflexivity

Reflexivity is when the researcher steps back in an unbiased mode and thinks critically about his role and asks himself how he knew what he gained as knowledge at a certain time, as defined by Guillemin and Gillam (2004). For me, as a researcher, maintaining reflexivity is planned by consistently reflecting on the researcher's own values, beliefs, and assumptions as well as regularly reporting to the participants regarding the outcome of each action research cycle and ensuring that participants were briefed on each cycle's progress and results. The discussions between me, as a researcher, and the participants are based on open and honest dialogue to minimize any biases or pre-existing assumptions or beliefs that may affect the research findings. More details on implemented reflexivity procedures are in sections 3.4 and 3.7.

3.2.4.3 Social Change and Improvement

The action research project aimed to achieve a positive impact on the company by addressing operational inefficiencies and promoting improvement (Coghlan and Brannick, 2014). To realize this goal, it was apparent to work closely with company stakeholders to identify areas with potential for improvement, gather insights from various stakeholders, collaboratively develop an effective actionable framework to address the business problem and evaluate with the stakeholders on how to take such framework into implementation. By following this process, the action research project aimed to not only enhance the organization's performance but also create a more efficient and sustainable working environment for the service line employees.

3.2.4.4 Empowerment

The aim was to empower the company participants by encouraging them to have an active role in the research process by involving them in problem identification and resolution outcomes (Greenwood & Levin, 2007). This can allow promotion of a sense of ownership and commitment to the proposed changes. In addition, the empowerment approach can help to build a future capacity within the organization, and enable staff to address future business challenges more effectively. That was achieved by encouraging open dialogue and communication with the stakeholders, facilitating active participation, and promoting a sense of ownership, commitment, and freedom to propose new ideas, strategies, and perspectives.

3.2.4.5 Ethical Considerations

Throughout the research process, ethical guidelines were adhered to, ensuring that actions were transparent, respectful, and safeguard the dignity and well-being of all participants (Schniedermann, 2022). DiCicco-Bloom and Crabtree (2006) mention that four ethical issues might be raised during the interviewing process. These are risks due to unanticipated harm, a lack of protection of the interviewee's information, not informing the interviewee about the research progress, and the risk of manipulation.

To mitigate these issues the following steps were planned: First, the research was designed in an emergent form, in which the themes of interest were defined based on the outcome of information shared by the interviewees. It was apparent that any directive questions to be avoided, as detailed in the interview protocols (detailed in Appendix B). In addition, during the interview, specific words were repeated to confirm the understanding and enrich the description (DiCicco-Bloom and Crabtree, 2006) to avoid any misunderstanding. Second, participation was voluntary during each action research cycle, and the interviewee was told that s/he had the right to withdraw at any point of time. The interviewees expressed understanding and did not demonstrate any intention to withdraw. During the interviews none of the participants exhibited any discomfort or feelings of harm that required support. Third, it was mentioned to each participant that participation would not lead to gains or impacts on their job role or reflection on their annual appraisal, whether directly or indirectly, which was acceptable to all of them. Finally, all participants' personal information was anonymised, including their demographic information, to avoid any impact on any of them.

Ethics tensions are normal during research work, according to Guillemin and Gillam (2004), who state it is a normal practice that can occur daily during research work. They mentioned two different dimensions of ethics in the qualitative research type: (1) procedural ethics and (2) ethics in practice. Research integrity concerns how to be honest, trusted, and committed to ethical standards and values, including the researcher and the participating team. Guillemin and Gillam (2004) defined procedural ethics as the process of seeking the needed approval from people and committees to involve their participation. That was considered in the initial step of the action research by obtaining the required corporate approvals from the company, which allowed to interview the researcher's colleagues in the service line, collect the required information that could benefit the research requirements, and suggest the actions needed as part of the research cycles. The regional legal director and service line vice president granted the required approvals. In addition, as part of the employment contract, the researcher signed an adherence to the company's code of conduct framework. Also, the research consent form was signed by each participant before starting the interview to ensure his/her approval before commencing the data collection process, with a copy of the participant information sheets. This is in alignment with the university ethical procedures, and a copy of these forms is in Appendix C & D.

Ethics in practice is defined by Guillemin and Gillam (2004) as the daily ethical issues in which the researcher must evaluate using integrity and reflexivity whether they are ethical dilemmas that must be discussed and reported. If an ethical dilemma is encountered, the researcher's plan was to discuss it with the vice president of the service line and the participants. The participants signed the code of conduct of the company; they were honest and trusted to give a fair view. None of the ethics in practice were encountered during the research work.

On confidentiality, Novak (2014) suggested maintaining it to provide a level of trust between the participant and the researcher. If such trust is maintained, the participant could share information categorised as critical, such as financial information. It was apparent to use an identification number instead of the participant’s name, and no information would be shared that might harm an individual or the company or create bias in the research outcome.

In conclusion, the axiology of the action research project highlights the importance of collaboration, reflexivity, social change, empowerment, and ethical considerations. By adopting these values, the research environment can encourage positive change, empowers company participants, and adheres to ethical standards.

3.2.5 Section Summary

In summary, the research's epistemological stance considered both a constructivist and a constructionist perspective. The ontology emphasizes the importance of engaging stakeholders and co-creating knowledge required for problem resolution. Participatory/collaborative action research was selected as a research type. The axiology aligns with the values that establish a proper environment for positive change, empowering company participants and adhering to ethical standards. The next section outlines the research stakeholders and research.

3.3 Research Stakeholders, Setting & Time Horizon

This section illustrates the engaged participants, their roles and the selection criteria, as well as the research setting aims to offer a comprehensive understanding of the research environment by detailing the context, location, and organizational information, as well as the research time horizon.

3.3.1 Research Stakeholders (Participants)

The participants, who are work colleagues and working together regularly, were selected based on the following criteria: (1) their possession of rich, descriptive, and in-depth knowledge about the research topic due to their job role in the company, and (2) their willingness to participate and dedicate time to the research. The criteria used to select participants ensured that the outcomes were not negatively influenced, as the selection was based on individuals who could add value to the project. A total of 10 participants were considered in the 3 cycles, divided into: five employees involved in the services-sales processes as part of their job duty, five involved in the delivery processes. However, in cycle 1 only, there was an additional 2 participants were considered, these are: one employee who was the service line finance partner (the company appoints one finance partner for the entire service line in the geographical territory, in this case, the Middle East and Africa region), and the other one was the regional service line leader. That addition was due to the results validation and better understanding of setting the service line budgets. Hence, both the finance partner-participant and the regional service line leader were only engaged in cycle 1 due to the need to collect some relevant financial data on how budgets and benchmarks are set for the service line, as well as the validation of cycle 1 outcomes with the service line strategy. However, during cycles 2 & 3, only 10 participants were engaged. The term stakeholders refers to the participants contributed to the action research from the service line (only as internal employees).

The participants were chosen based on various factors. First, their seniority in their practice roles, provided them with an understanding of the service line performance indicators, the factors influencing these indicators, and in-depth knowledge of the service line business processes. Second, they were top performers in the company, as rated in the talent review system (talent rating is only visible to the service line leadership team who has the execution ownership of the profit and loss financial responsibility), allowing them to offer diverse opinions and innovative thoughts. Third, they had market awareness, enabling them to understand the factors affecting the decision-making process and creating a business impact. Lastly, they expressed their willingness to participate and the ability to meet the time requirements for the research and interviews. Table 3.1 provides the list of participants in an anonymised form.

Table 3.1: Participants' List with Masked Demographic Information

Participant Code	Role	Languages Spoken	Age	Gender	Years in Role/ Company
MS1	Sales Role	English, Arabic	-	-	-
MS2	Sales Role	English, Arabic	-	-	-
MS3	Sales Role	English, Arabic	-	-	-
MS4	Delivery Role	English	-	-	-
MS5	Delivery Role	English, Arabic	-	-	-
MS6	Delivery Role	English, Arabic	-	-	-
MS7	Sales Role	English, Arabic	-	-	-
MS8	Sales Role	English, Arabic	-	-	-
MS9	Delivery Role	English, Arabic	-	-	-
MS10	Delivery Role	English	-	-	-
MS11	Finance Role	English	-	-	-
MS12	Regional Service Line Leader	English	-	-	-

Each participant was given a code starting with the prefix 'MS' and then a number (e.g. MS1). Demographic details of the participants, such as age, nationality, years of experience, and nationality, have been anonymized to maintain confidentiality as per the signed participation consent form and approved PIS form. The participants represent a diverse background and varied experience within the company.

The selection of participants took diversification into account as much as possible based on job roles. For example, the sales process participants included roles such as services solution executive, enterprise architect, and business development manager, all of which are roles within the sales function. Meanwhile, the delivery participants, those who deliver the projects' scope, included roles such as practice leader, project manager, architect, and technology consultant. There was a limitation in balancing selection based on gender due to the lack of female senior leaders in the service line, noting that the company considers gender-split reporting as a protected information. Only two females participated out of the engaged stakeholders. That presented a limitation that might not enrich the research outcomes based on gender perspectives and could present an opportunity for future research.

The sample selected represented senior individuals who were managers, director-level, and lead roles. Participants exhibited their willingness to participate during informal discussions with the researcher, and were then formally got invited via email. Only one invited person declined the invitation, citing time constraints as the reason, and he was not included in the final list of the 12 participants. The selected number of participants was considered adequate due to the lack of having new emerging themes related to the research questions beyond what was already captured. It was notable that in the seventh or eighth interview with the participants, that the interpretations were repeatable without no capturing of new views or expression from the participants. This will be further explained in subsequent Chapters 4-6.

The participants provided valuable insights, perspectives, and experiences related to the workplace problem and research questions. That allowed a deeper understanding of the business issues at hand and contributed to the development of actionable knowledge and recommendations for improving the service line's operational efficiency.

3.3.2 Research Setting

The research setting for this project is focused on achieving operational efficiencies within a service line of a leading cloud computing vendor. The context involves understanding the key performance indicators, internal processes, workflows, and practices employed by the company in its service line operations. The study's location is in the UAE, targeting the Middle East region, which represents the focus geographical area of the research. The Middle East territory, as per the company's design, includes countries such as the UAE, Saudi Arabia, Qatar, Kuwait, Oman, Lebanon, and Jordan. The company under research is a publicly listed multinational with a diverse workforce and a complex operational structure. The service line offers a wide range of services and solutions to clients across various industries. The next section illustrates the research time horizion and key performed activities.

3.3.3 Research Time Horizon

This section outlines the time horizon of the project. Figure 3.1 provides a graphical visualisation of the timelines, while Table 3.2 explains the key performed activities for each time period. Appendix A provides detailed explanation of the performed activates.

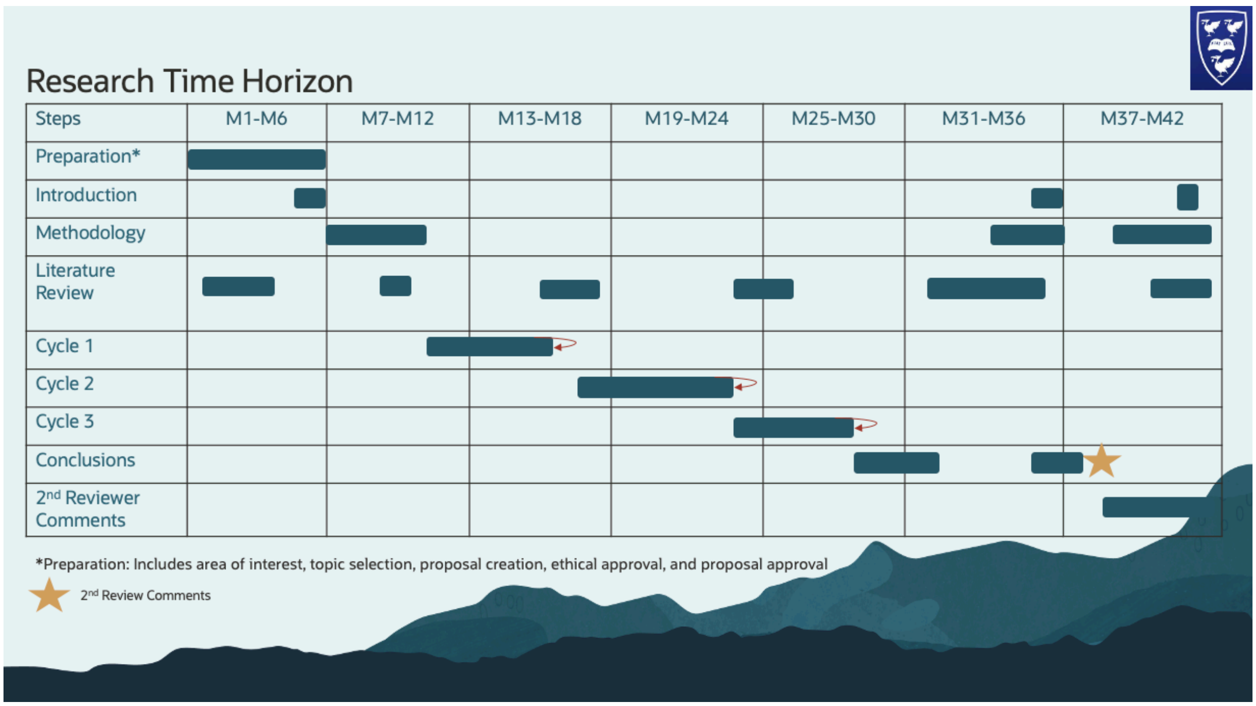

Figure 3.1: Graphical Visualization of Research Timeline Horizon

Table 3.2: Performed Activities Per Each Time Period

	Timelines	Activities Per Research Steps
1	M1*-M6 *M1: Dec. 2019	• Preparation: Identification of areas of interest, topic selection, and creation of templates • Literature Review: For proposal write-up • Definition of initial research questions (RQs)

2	M7 – M12	• Introduction: Chapter 1 for the introduction. • Methodology: Chapter 3 as methodology. • Literature Review: Revision prior cycle 1 start. • Interview protocol of cycle 1. • Start of Cycle 1: Data collection, data analysis and findings.
3	M13 – M18	• Change of research questions according to the outcome of cycle 1 and validation with engaged participants. • Literature Review: Literature review after identifying research focus areas. • Interview Protocol of cycle 2. • Cycle 1: Completion of cycle 1 activities. This activity was cyclic with participants and results were shared with engaged participants. • Start of Cycle 2: Data collection, data analysis and findings. Outcome was the first version of chapter 5.
4	M19 – M24	• Literature Review: Reviewing literature after identifying recommended actions. • Cycle 2: Completion of cycle 2 activities. This activity was cyclic with participants and results were shared with engaged participants. • Interview protocol of cycle 3 • Start of Cycle 3: Data collection, data analysis and findings. Outcome was the first version of chapter 6 as cycle 3

5	M25 – M30	• Cycle 3: Completion of cycle 3 activities. This activity was cyclic with participants and results were shared with engaged participants. • Chapter 7: Starting the writeup activity of the project research conclusions.
6	M31 – M36	• Introduction, Methodology, Literature: Second version after maintaining supervisor feedback, including the literature review after identifying how to take actions into implementation. • Chapter 7: Completion of first version writeup.
7	M37 – M42	• Receiving second reviewer comments. • Introduction, Methodology, Literature: Second version after maintaining second reviewer feedback. • Fixing second reviewer comments for entire research document. • Submission of research document after revision by supervisor.

The study took nearly three and a half years from the start of the research proposal and ethical templates' approval to the submission of the research. From the proposal and initial preparation to the required ethical and company approval, it took an average of six months. The research data collection phase was conducted in three cycles, each lasting an average of five months, except for cycle 2, which took six months. Each cycle period included the time required for interview protocol, participant interview preparation and execution, data analysis and writeup of the cycle chapter.

In summary, section 3.3 outlines the research stakeholders and setting, detailing the participants' selection criteria, roles, and the research environment. The study focuses on achieving operational efficiencies within a cloud computing vendor's service line, targeting the Middle East region, and engaging 12 participants from various roles to gather diverse insights and experiences to develop an actionable framework for improving operational efficiency.

The following section explains the researcher's role, exploring the positionality, responsibility, and complexities of duality and reflexivity within the research process.

3.4 Researcher’s Role & Values: Positionality, Responsibility, Duality & Reflexivity

This section illustrates my role in the project, as a researcher, focusing on the various aspects of positionality, responsibility, duality, interactions with participants, and the implementation of reflexivity to minimize personal biases, as well as my own values.

First on positionality, as the primary researcher, I had an insider position within the company, which allowed me to have a deeper understanding of the service line context and working culture. My familiarity with the company under research and service line facilitated access to the required data and key stakeholders. As an example, the understanding of service line priorities, the access to top talent and financial data. However, I remained cautious about the potential biases arising from this insider position and maintained a critical distance by continually reflecting on my assumptions and perspectives. I asked myself questions such as: How has the knowledge emerged? What potential personal influence do I have? Are the outcomes based on participants' perspectives or influenced by my own beliefs and assumptions? Do outcomes have an emotional bias due to my role's exposure to various service line information? By addressing these questions, I ensured that the research findings were as objective and unbiased as possible, considering that outcomes emerged based on the consent of the majority of stakeholders involved.

Second, regarding responsibility, my role as a researcher was to facilitate the action research process by engaging with company stakeholders, guiding them through the problem-solving process, and promoting collaboration and knowledge sharing. My responsibilities included designing the research process, ensuring ethical conduct, and maintaining trust and reflexivity throughout the study.

Third, regarding duality, my role involved a dual capacity as both a researcher and a member of the organization. Balancing the demands of the research with my job responsibilities required maintaining a clear distinction between the two while remaining aware of potential conflicts of interest. A key challenge during the research project was managing time constraints due to the dual role, particularly during quarter-end periods, strategic planning sessions, and high workload periods. To address these challenges, I prioritized my job responsibilities during peak times, while reserving weekends and early morning hours (e.g., 6-8 am during workdays) for research work as much as I could. This approach allowed me to effectively manage the duality of my role and maintain the integrity of the research process.

Other challenges related to duality included power dynamics, which could potentially influence participants' responses. This was managed by encouraging open dialogue and emphasizing that there would be no advantages or beneficial returns at work for participating in the research project. Confidentiality and trust were also challenges and were addressed by implementing appropriate measures to ensure participant privacy and by explaining the data collection and analysis processes to participants prior to their participation, thus establishing trust.

Engaging in reflexivity was essential to manage potential personal biases and to ensure no enforcement by the literature review organizational disciplines and concepts (Finlay, 2002). Reflexivity was implemented by questioning the outcomes and interpretations to ensure participants' perspectives were accurately captured without personal influence or interpretation enforcement. I maintained a reflexive journal to document my reflections, which were based on examining my thoughts, assumptions, and beliefs, as well as recognizing the influence of my positionality on the research outcomes (Creswell, 2014). The journal included notes on potential personal biases such as the interpretations related to team cohesiveness, talent attraction tools, and net promotor score versus customer satisfaction. It also included the feedback from participants and re-evaluation of interpretation, for instance, the outcome of cycle 1 was surprising compared to the literature review, and also the difference of such an outcome with a cloud vendor versus a non-cloud vendor which is explained in the subsequent chapters.

Another challenge where reflexivity was crucial is the influence of preunderstanding and its impact on research outcomes. For instance, the service line strategy uses "Positive Deviants" with the aim of highlighting the exceptional work of service line employees in a positive manner (Singhal and Dura, 2009). Singhal and Dura discussed the concept of Positive Deviants as individuals or groups who deviate from the norm in a positive manner and demonstrate exceptional performance or behaviors. However, the majority of stakeholders suggested that this term could be replaced with a broader term like "Technology Disruptors" to better reflect the impact on the service line as well as the value provided to clients. Reflexivity helped to reduce the impact of pre-understanding influences by encouraging reflection and thoughtful engagement with stakeholders.

Reflexivity processes played a critical role in achieving a second-person action research approach in this project. By engaging in continuous reflection and open dialogue with collaborators, mutual learning and improvement were promoted (Reason and Bradbury, 2008). This practice of reflexivity allowed to address potential biases, develop a deeper understanding of the business problem, and enhancing the collaborative nature of the action research.

During the reflexive processes, a key limitation was the time challenge in terms of balancing working capacity and the time needed for the reflexive process and validation with the participants. There were times when it took days to validate the interpretations and meanings with the participants, which elongated the time schedule. As a result, the original plan for cycle 1-3, which was set for 9 months, was extended to around 16 months. While this extended timeframe allowed for comprehensive reflexivity, it also presented challenges in terms of meeting project timelines. It was apparent that reflexivity contributed to establishing trust with participants, as they recognized the effort to minimize personal biases.

These reflections were used to inform and adjust my approach as necessary. For example, the outcome of the first research cycle was entirely unexpected (presented a surprise as an emergent knowledge) compared to my initial thoughts during the cycle's execution, which could have been influenced by the literature concepts.

Emotional involvement was another challenge that could impact the judgment and interpretation of the findings. This was managed by reflecting on my emotions, as a researcher, and examining whether interpretations were based on emotional feelings or accurately reflected stakeholder perspectives. For example, during difficult times of declining margins, there were signs of ineffective communication between some service line employees. While emotions could suggest personal-related conflicts, further analysis revealed that the issue was due to a lack of cohesiveness in the service line's working culture.

And, ethical considerations were crucial to ensure the research's integrity and protect the participants from any harm due to their engagement in the research process. This was achieved by obtaining all necessary approvals from the company and participants, ensuring that any confidential or protected information was not shared by participants, maintaining confidentiality, and anonymizing stakeholders' identities.

And finally, concerning interactions, I adopted a collaborative and participatory approach in my interactions with the participants, promoting an open and inclusive environment that encouraged the exchange of ideas and perspectives. I facilitated discussions, providing support and guidance when needed, such as explaining the data collection and data analysis processes, and obtained feedback from participants throughout the research process.

In terms of my own values, I prioritize contribution, inclusion, collaboration, and transparency. These align with the philosophical stance of the project, allowing me to actively participate with stakeholders, ensure diversity, and engage in open and transparent interactions (Heron & Reason, 2001). Additionally, I am committed to maintaining high standards of integrity and ethical practices (Creswell & Poth, 2016), which have helped establish trust with stakeholders. Moreover, I am fully aware of the challenges related to my insider role duality and positionality (Coghlan, 2003). As such, I value reflexivity and engage in continuous self-critical reflections (Finlay, 2002), maintaining open dialogue and seeking validation from stakeholders. Lastly, my aim is to generate meaningful outcomes that enhance practice and create positive change (Stringer, 2013).

In summary, my role as a researcher in this action research was defined by a complex interaction of positionality, responsibility, duality, and reflexivity. By proactively addressing these elements and maintaining a reflexive approach, I aimed to guarantee the integrity, and ethical conduct of the research process and achieve the research philosophical requirements. My values as an inside researcher include collaboration, inclusion, transparency, ethical practices, reflexivity, and a focus on meaningful outcomes The next section illustrates the data collection planning process and the selection of the data collection method.

3.5 Data Collection

This section outlines the data collection process, including the selection of data type, the collection method, the rationale for using such a method and technical considerations, highlighting any potential ethical considerations.

3.5.1 Selection of Qualitative Data

Qualitative data has been selected for the defined workplace problem. Creswell (2014) explains that qualitative data takes the form of words, either spoken or written, and allows researchers to capture and understand people's opinions, feelings, experiences, thoughts, and ideas. This type of data can be collected through interviews and analyzed into themes and patterns to understand the experiences and perspectives of the participants.

Achieving the aim and objectives of this action research requires open-ended discussions with participants to obtain their perspectives on resolving the current business model. In conducting open-ended discussions, as a researcher, I asked participants open-ended questions that could allow them to provide detailed and in-depth feedback in their own words. This approach enabled me to obtain stakeholders' perspectives without restricting them to predetermined answers or influences (Coghlan, 2003). This approach aligns with the philosophical position of avoiding influences and ensuring the emergence of results and outcomes. Tetnowski and Damico (2001) argue that analyzing human communication is a complex, multidimensional process that is not well-suited to quantitative methods but can be effectively explored using qualitative methods, which can capture various dimensions of human behavior. The aim is to find actionable knowledge that leads to operational efficiencies by influencing the key performance indicators of the service line and determining appropriate actions for positive change.

Although the company is publicly listed, obtaining in-depth knowledge from senior staff about regional key performance indicators required considerable effort, as this information is not publicly available. Such efforts are necessary for understanding the perceptions, feelings, experiences, and views of engaged participants regarding potential improvements to the working business model.

This type of outcome requires data that cannot be captured via numeric surveys. Additionally, obtaining financial data from participants necessitates building comfort and trust between the interviewer and participants, which may not be achieved using a quantitative approach like responding to a survey. Designing a survey and asking senior members to participate may not guarantee the desired quality of information, especially since discussions could involve financial figures that might trigger concerns about data usage. Furthermore, busy schedules or fear of harm due to sharing information could prevent participants from dedicating enough time to participate or fully answer all the questions.

As an ethical consideration note, to address any fear that could arise regarding the discussion of financial data related to the service line, no specific financial figures that could indicate or reflect any private or company-related restricted information are mentioned in this thesis document.

The qualitative method was more appropriate for this action research than the quantitative method for several reasons. First, the research questions required a word and meaning analysis, rather than relying on numbers and statistics. The performance indicators of the service line revealed problems in specific business areas that could be explored through participants' experiences and in-depth knowledge. Second, action research did not aim to validate a theory or hypothesis, making quantitative or mixed methods less suitable choices. As Rahman (2017) notes, quantitative methods are more dominant in assessment research. The goal was to understand the insights available in participants' thoughts, perceptions, and experiences. Finally, the required data contained the company's financial performance indicators, which could not be feasibly obtained through numeric surveys of the participants.

3.5.2 Selection of Primary & Secondary Data

The type of data selected for this research were primary and secondary data. Primary data refers to data collected by the researcher directly from the participants through various ways such as interviews (Creswell, 2014). Primary data was gathered through direct engagement with the service line stakeholders, rather than relying on secondary sources. Primary data was collected through interviews, which allowed for greater relevance and accuracy in relation to the research topic (Creswell, 2014).

The selection of primary data was driven by several factors. First, although the company is publicly listed and publishes its financial figures every quarter, the available figures are presented only at the company's global level and not at the sub-geographical region level, such as the Middle East, which represents the focus geographical area of the research. In addition, the company shares limited information about key performance indicators at the global level, including revenue, costs, and margin, but does not provide details on other important indicators like services-sales bookings, average daily rates, subcontractor costs, and employee utilization.

Second, the type of data required to understand people's perceptions, feelings, thoughts, experiences, and views was not available through other sources. Obtaining in-depth knowledge from individuals within the service line was necessary to collect rich information pertinent to the research domain. By selecting primary data, the research was better equipped to capture the complexities of stakeholder perspectives, ultimately contributing to a more comprehensive understanding of the research question.

Secondary data typically include pre-existing data or documents that can support interpretation (Bryman, 2016). The secondary data used were very limited, primarily the service line's strategy document and performance indicators at the beginning of the research project to understand the trend of the service line results over time. This information was crucial for comprehending the reasons behind the decline in financial margin.

3.5.3 Selection of Data Collection Method

The selected data collection method for this action research was semi-structured interviews, with open-ended questions and supported prompts in the interview protocols. Appendix B details the used interview protocols throughout the three action research cycles. For the first cycle, the selection of research questions was influenced mainly by the literature review, though the outcomes were surprising. However, for cycles two and three, I was engaged with stakeholders as part of the prior cycle briefing on the results and outcomes, to identify key areas to explore in the next research cycle interview protocol. Semi-structured interviews allowed data collection through one-to-one conversations between the researcher and participant in a natural flow. The aim was to ensure an emergent design (Creswell and Poth, 2016) and use reflexive procedures to avoid influence by the interviewer.

The interview protocols acted as procedural guides during the interview process. It included the details of the research study and the reason behind it, in addition to asking the participant to sign the consent form. Furthermore, it included sharing the participant information sheet, and giving more detailed information to the participant about various topics, such as confidentiality. Furthermore, the interview protocol had a script for the conclusion and prompts for collecting interesting information (Jacob and Furgerson, 2012). The protocol for the conclusion discussed the subsequent actions as part of the research cycle and set the expectation that future contact might be required with the participant if clarification, validation or feedback was needed.

The researcher generated questions according to the flow of discussion, which could help the researcher develop the social reality based on the interviewees' perspectives. Zhang and Wildemuth (2009) mention that researchers and participants arrive at informal discussion, in which no predefined theoretical framework is established. The questions were positioned to shift from broad to narrow within each potential topic, avoiding influencing the response from the way the question was formatted, having one question at a time, and refraining from having multi-part questions. The interview protocol avoided any kind of directive questions, thus allowing the interviewee to share all the possible information that could be provided.

For instance, the questions began with the words 'tell me about', 'describe', 'what else would you suggest', 'tell me if something I need to know about', 'imagine if such a situation happens, what do you feel about it', and 'tell me your feelings about'. The interview protocols included a section for 'Prior Interview' actions, in which the researcher could confirm with the interviewee any clarifications required regarding his/her role and ensure other information, such as a signature on the consent forms, the outcome of each research cycle, and the role of the interviewee.

All interviews were conducted in the English language. Despite the primary language in the region under research being Arabic, being a multinational vendor, the primary communication language is English, and that did not cause any feeling of discomfort with any participants whose native language is non-English. Table 3.1 illustrates the languages that participants were able to speak.

The interview timings were agreed upon prior to the interview date with the participants to ensure the participant could allocate the best possible timing slot, such that s/he could participate without any distractions in the form of business calls, meetings, or personal engagements. The consent form and participation information sheet were shared before the agreed meeting date to allow the participant enough time to review them. Then, the content of the consent form was discussed at the beginning of the first interview, during which it was informed that the contents applied to all research cycles planned, signed by the participant, and submitted via email before the start of the data collection in-depth discussions.

As a Duality & Responsibility Note, on numerous occasions, participants faced work-related meetings or activities that conflicted with the scheduled time for data collection. To prevent tension, conflict, or issues, the researcher would emphasize the priority of work activities and seek an alternative time slot suitable for the participant. Most often, participants preferred weekend slots or early morning slots before official working hours began.

3.5.4 Semi-Structured Interview Approach

A gradual approach was followed during the interaction process with the engaged participants to ensure a comfort level was achieved prior to asking questions related to financial information or personal judgments about existing business models. Jacob and Furgerson (2012) emphasize the importance of building trust and rapport between the interviewer and interviewee before pursuing deep knowledge collection as part of the interview process. Additionally, to ensure the meaning with the participant, the interviewee's words were questioned by the researcher to ensure a shared understanding between the researcher and participant. For instance, when the term "talent attraction tools" was used, the researcher asked the interviewee to confirm its meaning to ensure the intended perspectives were captured. Hence, asking the interviewee to explain by examples was relevant. This approach helped facilitate effective communication and promoted a supportive environment for open discussion based on trust during the interviews. As a note, the first iteration of interviews with participants lasted an average of 90-120 minutes, while the second iteration lasted an average of 45-60 minutes per participant, which was repeatable for each cycle.

Structured interviews were not the best fit for this research, as the study was designed to obtain the areas of interest from participants without bias from the researcher and to explore their ideas for addressing the workplace problem. The research topics were defined based on the participants' experiences and inputs, and this required following an open-ended question approach that would not be possible using structured interviews, which are better suited for closed-ended questions.

In addition, a trust level was required during the interview process to obtain in-depth information and ask for financial details. The roles and seniority of the participants were different, which could not guarantee standardized responses through structured interviews. To build trust, it was necessary to use a more flexible approach like semi-structured interviews.

In-depth interviews were not suitable over focus groups or open-ended surveys because it was difficult to find agreement among participants regarding pre-defined slots that could suit all of them simultaneously for the data collection process. Additionally, focus groups or open-ended surveys would not allow for developing the necessary level of trust to ask about financial information. Furthermore, online focus groups and open-ended surveys could not allow understanding each participant's feelings compared to in-depth interviews.

Overall, semi-structured in-depth interviews were the most appropriate approach for collecting the required rich information flexibly and in rapport-building.

3.5.5 Technical Considerations

Two technical considerations were in place during the data collection interviews. First was the online interviewing tool. All the interviews took place virtually (online) using the Microsoft Teams (Teams) application, which allowed for holding digital meetings without physical interaction, thereby ensuring the participants’ safety from COVID-19 caused by physical interaction. The participants did not object to using Teams as an interviewing tool, especially since it applies the security prerequisites for secure connections. Furthermore, at the beginning of each meeting via Teams, the participants were informed about enabling the lock meeting room option, which disables external access for anyone in the company who might try to log in to the digital meeting room, thus providing a level of comfort to the participants prior to the start of the conversation. The utilization of virtual meetings with video capabilities did not impact the understanding of participants' feelings and emotions, as the video component allowed for the observation of non-verbal expressions during the discussions.

Second, is the method of recording the interviews. The interviewees provided permission to record the interviews as part of their consent form signature. Two technical methods for recording were employed. The first was by enabling the Teams application recording tool, which saves the recording file of the meeting conducted on the laptop used for the online interview; the personal laptop was used for all the interviews conducted, of which the interviewees were informed. Once the meeting concluded, the recorded file was uploaded into a shared folder created under the university email ID account. And second, and as a back-up plan, if there were any problems with the Teams recording file, a Voice Recorder tool of an external tablet was used with access password protection.

Once the interview ended, the file was uploaded to the shared folder. The recorded data via Teams was sufficient for the data transcription, and the tablet recorded files were not used. The interviewees were informed that once the data were transcribed and analyzed, which took on average five-six months from the starting of interviews, the files would be purged from the shared folder, local laptop, and tablet device. The interviewees expressed understanding and acceptance of the recorded file deletion period.

3.6 Data Analysis

This section outlines the various data analysis procedures including the process of data analysis, the relevance of inductive thematic analysis to research questions, and technical considerations, as well as some reflexive notes.

3.6.1 Process of Data Analysis

This section outlines how the process of data analysis were performed. The inductive thematic analysis method was used to analyze the collected semi-structured data and identify the common emerged themes and relationships between the collected data. Braun and Clarke (2006) described thematic analysis as six sequential phases: (1) familiarisation, (2) coding, (3) generating themes, (4) reviewing themes, (5) defining and naming themes, and (6) writeup. The familiarization phase involved transcribing the data and saving the transcripts in the NVivo software. NVivo, a powerful qualitative data analysis software tool, was chosen for its capabilities in organizing and analysing unstructured data effectively (Castleberry and Nolen, 2018). The use of NVivo supports the data analysis process and allows researchers to track their analysis, decisions and enable the efficient retrieval of relevant information from a large dataset (Welsh, 2002).

Reading the transcripts multiple times and annotating them within NVivo was a crucial step in developing an understanding of the data, which allowed for the identification of patterns and themes emerging from the interviews (Riessman, 2008). This process also ensured that the coding and analysis were firmly grounded in the data, which enhances the credibility and trustworthiness of the research findings (Elo et al., 2014). Figure 3.2 displays sample transcripts from NVivo tool.

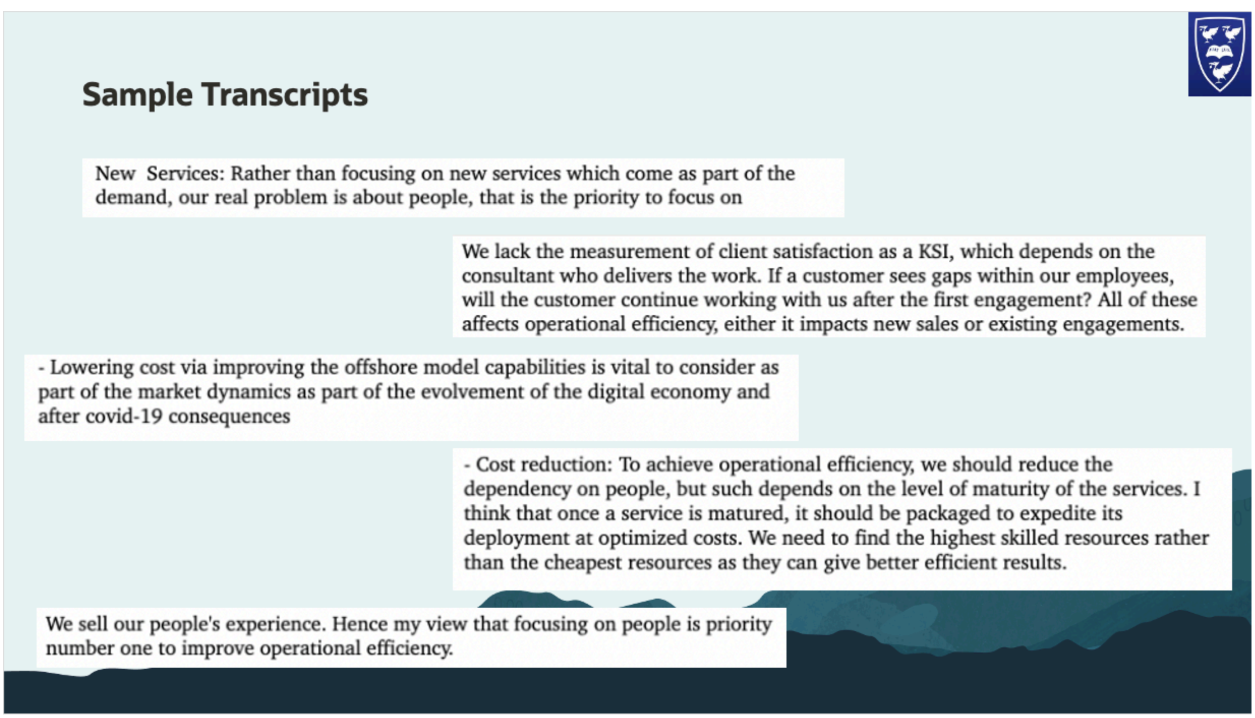

Figure 3.2: Sample Transcripts

In the second coding phase, each interesting thought or perspective was highlighted against a defined code, and a data set of codes was defined as an outcome. A scan of the generated data set was performed before advancing to the third phase to ensure no repetition of the defined codes and ensure data were collated correctly under the right code. As an outcome, the Nvivo tool has the transcripts and a defined set of codes. Codes were data-driven based on participants' own words. The manual inductive coding approach was used, which allowed for generating the outcome based on the collected data. Manual coding was performed by dividing the data into smaller sets, assigning a descriptive code to these sets, and grouping similar codes into a broader representative category. The process of reading the data and assigning codes proceeded through multiple iterations until ensuring the given code was valid and the proper groups were well-defined. Moreover, non-important codes were non considered (Nowell et al., 2017). Figure 3.3 shows sample screen from NVivo tool that illustrates generated codes and emergent themes.

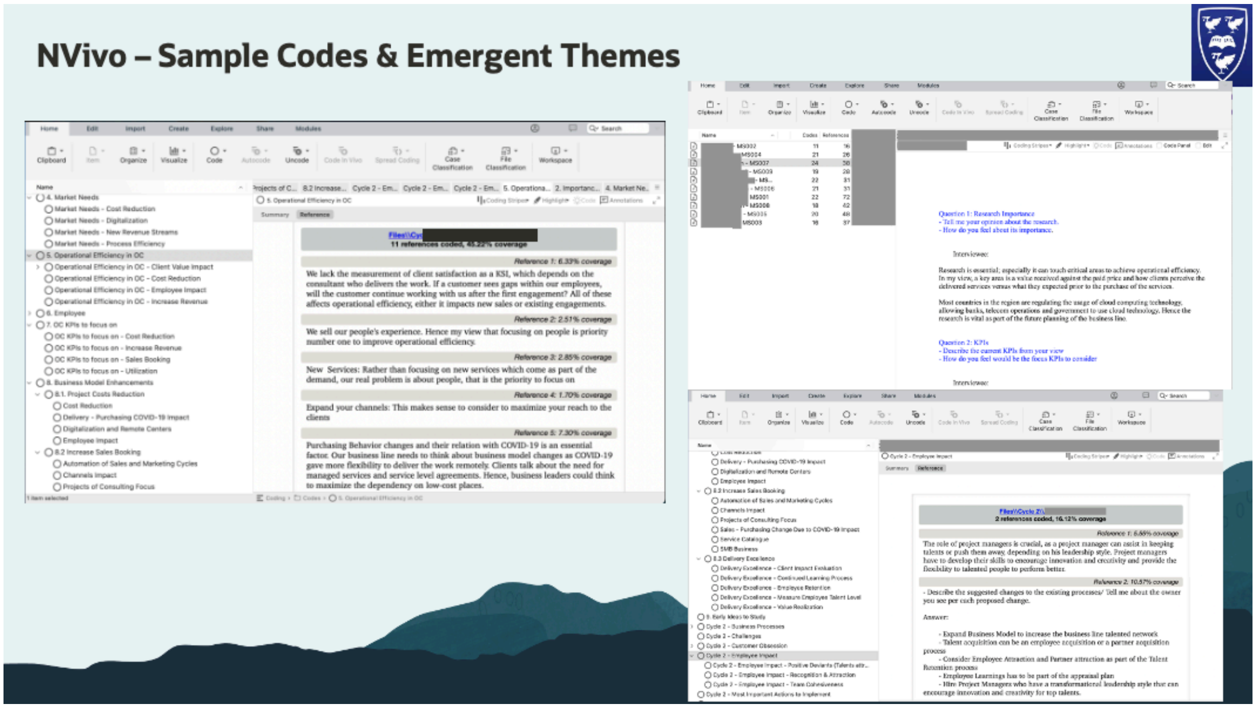

Figure 3.3: NVivo – Sample Codes & Emergent Themes

The third phase was the generation of the themes, in which a group of codes was defined and collated under a potential theme, and an initial name was assigned to each theme. In this phase, some codes might be dropped or appear insufficient to generate potential themes. At that point, the themes were created in NVivo and each theme had a group of codes. The generated list of themes was reviewed in phase four to ensure consistency with the defined codes and accuracy to improve the defined themes' quality.

A Reflexive & Quality Note: As a researcher, I maintained diary notes while reviewing transcripts and data analysis process to record my thoughts and critical ideas that needed validation from stakeholders. I conducted multiple iterations with participants to verify the meanings and defined codes using a cyclical approach. For example, when a new concept was introduced by a certain participant and not discussed by others, I sought their views and *perspectives for validation. For instance, the introduced concepts of team cohesiveness and talent attraction tools. When an emergent theme arose, I would reflect back and challenge myself to determine whether it was an inductive emergent theme and if it potentially carried any biases from me as a researcher.*

Whether a theme required to be split or even dropped was determined in this phase. This phase's outcome was a solid, consistent list of defined themes, and a thematic map for the analysis was generated. In the fifth phase, the names of the themes were reviewed to ensure the best name was given according to the overall story. The trigger to end the data collection process for each cycle was whether new emergent themes could be defined. Once the maturity of themes was achieved, it presented the data collection process's exit criteria per cycle. Finally, the outcome of the analysis was written as the outcome of the data analysis of the action research cycle. Diary notes were maintained during various stages of the research project, encompassing data collection, data analysis, and moments of reflexivity. For example, questions arose, such as, "What do talent attraction tools mean? Are they limited to compensation benefits or do they include other considerations?" The outcome of Cycle 1 raised concerns about the relevance of results for cloud computing vendors compared to non-cloud computing vendors. This concern is explained in Chapter 5.

3.6.2 Relevance of Inductive Thematic Analysis to Research Philosophical Position

Thematic analysis is an appropriate approach for the exploration of people's perceptions, views, and experiences, which aligns with the research's aim to recommend the participants' suggestions according to their opinions. It allows flexibility in the interpretation of data and for categorizing data into themes, allowing for a view of data from sales and project delivery perspectives. Javadi and Zarea (2016) state that thematic analysis is simple, flexible, and easily understandable to the public, making it accessible to less experienced researchers. This would be appropriate to obtain the stakeholders' perspectives to identify the focus areas, required actions and how to take such actions into implementation. While, thematic analysis has the risk of subjective analysis, according to Joffe (2012), depending on the researcher's judgment. However, during the interviews, the interviewees were asked to confirm the meaning of what they said. The outcome of each cycle was shared with each participant to build comfort.

The inductive thematic approach was used to generate a framework based on the collected data, without depending on theoretical data to avoid an influence by the literature review. This allowed the emergence of ideas and changes to the business model based on the participating team's opinions and experiences. Alhojailan (2012) states that the inductive approach is suitable to start with the most collected data, leading to specific content that can be transformed into a broader generalization and hence create knowledge. During the interviews, as a researcher, prompts were used based on the literature review outcome to explore the interviewee's opinion on the topic's relevance within the company to enable better operational efficiencies. In this study, the focus was on the explicit opinions expressed by participants, adhering to the semantic approach as suggested by Laham (1997). This approach enabled to directly interpret participants' perspectives, keeping the analysis closely connected to their actual words and experiences, without making assumptions about their statements. The aim was to provide actionable knowledge based on people's ideas, thoughts, and experiences which was suitable to the nature of the business problem, philosophical position, and research questions.

Hence, thematic analysis was sufficient for understanding the patterns and themes of the collected data in the context of qualitative research.

3.6.3 Technical Considerations

During the data analysis process, several technical considerations were taken into account. Initially, I attempted to use the NVivo Transcription trial version available at (https://eu-transcription.mynvivo.com/) for transcription. However, I discovered that the quality did not meet my expectations regarding the accurate conversion of spoken words into written text, possibly because the interviewees were non-native English speakers. As a result, I decided to conduct manual transcription, which took about two hours to transcribe a 30-minute interview manually. This approach allowed me to better understand the emotions and expressions of the participants, which was a significant advantage.

Finally, for coding the transcribed interview data, NVivo software was used, which was familiar to me. I found NVivo to be an easy-to-use tool that helped me code, classify, and categorize the data, as well as create relationships between different data points.

In summary, section 3.6.3 outlines the data analysis procedures used in the research, focusing on the inductive thematic analysis method. The process involved six phases and diary notes were maintained during various stages of the project. Thematic analysis was chosen for its alignment with the research's aim and philosophy to explore participants' perceptions, views, and experiences. The next section illustrates the quality evaluation of the study.

3.7 Quality Evaluation of Study

To ensure the quality of this action research, the study was evaluated based on Lincoln and Guba (1985) criteria of trustworthiness, credibility, dependability, and transferability. Reliability and validity were also considered in the evaluation process for data collection and analysis.

To address trustworthiness, as a researcher, I used member checking to validate the data and preliminary findings with the engaged participants. This helped to establish the credibility of the study by ensuring that participants' perspectives were accurately represented in the research. In addition, I used triangulation to compare and contrast data collected from different sources, including interviews with various participants of different roles in the service line, service line performance indicators and strategy documents, and observations about the service line-related procedures and capturing in the daily journal notes. An example of diary notes from my experience as an insider action researcher includes the observation that, although margin decline initiated the business problem, the indicators might reveal the causes of this decline. However, stakeholder perspectives seemed to be connected to various focus areas that could potentially impact the service line's outcomes. These insights prompted me to further explore the relationship between the identified focus areas and the business problem at hand, as well as seek additional stakeholder input to better understand their perspectives and potential solutions. Such usage of the triangulation approach supported the research philosophical positions and could establish the dependability of the study and ensure consistency and stability of the research findings over time and under different conditions.

I also used a reflexive approach to acknowledge and minimize the possibility of potential biases and assumptions throughout the study, which contributed to the transferability of the study's findings to other contexts. I maintained reflexivity by stepping back and reflecting on the findings, interpretations and concluded meaning and asking myself on the basis of these outcomes, is it based on the participants' view, did it have any personal or emotional perspectives or did it have any enforcement using my position power? I used to re-confirm such outcomes with participants to maintain reflexivity.

During the data analysis process, I maintained reflexivity by being aware of any personal biases or assumptions that might have influenced my interpretation of emergent themes. For instance, I initially interpreted talent attraction tools solely in terms of financial earnings. However, upon reflection and seeking feedback from the participants, I realized that their perspectives were not limited to financial earnings alone. They also valued opportunities for career development, working flexibility, and training investment. This example demonstrates how maintaining reflexivity helped me to ensure the accuracy and completeness of my interpretations and avoid any potential biases or assumptions. Section 3.4 provides details on challenges and limitations related to reflexivity.

To address reliability, as a researcher, I kept detailed records of all data collection and analysis procedures, as well as any decisions relating to the research project. Golafshani (2003) mentions that reliability concerns the quality of the research, and hence, validity cannot be achieved without reliability. To ensure consistency throughout the data collection and analysis process, the project was designed with a clear and well-defined methodology. Furthermore, I kept track in my daily research journal on any changes made to the research design or methodology and the rationale behind them to ensure the reliability of the study, for instance, the consideration of both constructivist and constructionist epistemological stances.

To address validity, I used member checking and triangulation to establish the credibility and dependability of the study. I ensured that the research questions were clearly defined, and validated with the engaged stakeholders and that the data collected was relevant to the research questions. In addition, I used a reflexive approach to minimize potential biases and assumptions throughout the study, which contributed to the validity of the findings. A triangulation strategy was used as well; the evidence was retrieved from various sources. Golafshani (2003) suggests that the triangulation method is a strategy for testing the validity and reliability of qualitative research. The findings were compared, in which coinciding items strengthened the view. Simultaneously, those that were deviant were captured and explored in detail to understand the reasons for the difference, as Creswell (2003) mentions. For instance, why performance indicators such as the employee average daily rate and utilization should not be part of the actionable framework focus areas. Data were collected from various sources to implement triangulation, including people from multiple functions and roles within the service line. For instance, interviewees in the sales or delivery function consisted of managers, technology architects, and technology experts (consultants). Such a diversity of participants allowed for collecting data from various subject matter experts in the service line business problem domain.

In summary, the combination of member checking, detailed documentation, triangulation, a clear methodology and a reflexive approach helped to establish the trustworthiness, credibility, dependability, and transferability of this action research, as well as the reliability and validity of the research findings. Such an approach ensured consistency with the philosophical position of the research. The next section illustrates encountered challenges and limitations..

3.8 Challenges & Limitations

This section outlines challenges and limitations encountered during the research project. First, a potential challenge was the pre-understanding of the researcher's knowledge about the company, according to Coghlan and Brannick (2014). As a researcher, I had access to information on the reporting region, which is the Middle East and Africa region. To avoid bias, a reflexive approach was followed during the research project. Second, the level of reliability and trust between the participants and the researcher, which Coghlan (2019) refers to as 'the reliability of colleagues'. This risk was mitigated by selecting participants who could add value to the action research, seek to generate knowledge, and are motivated by the benefit to the organization's performance without getting into political conflicts.

The third challenge concerned the type of accessibility of information, as mentioned by Coghlan and Brannick (2014), which is being an insider. The researcher had primary access to a certain level of information but not to confidential and restricted information, primarily at the headquarters level. Headquarters information was not required; whatever information was publicly available was sufficient.

Finally, a notable limitation was agreeing on specific timing slots with the interviewees, especially during the third month of each fiscal quarter of the company, given the pressuring objectives and performance monitoring that the company performs quarterly. It was required to check with each participant two or three times on average before agreeing on a slot, typically in the early mornings before work or over weekends. These challenges elongated the research time as explained in section 3.3.3.

Regarding limitations, the lack of female participants in the interviewees' list was a concern. Although two female participants expressed their willingness to participate, they could not find a suitable time to participate, especially given the workload challenges and their timing commitment to their children, as most schools were being held online due to COVID-19, requiring more time dedicated to their families. This limitation did not provide an average diversified gender view; however, most of the leadership teams in the service line were male, and that limitation could not be mitigated. Running virtual meetings due to COVID-19 restrictions did not present a challenge to understanding stakeholders' perspectives as these meetings were video-enabled, which allowed the understanding of their feelings and perspectives.

In summary, to address these limitations and challenges, as a researcher, I maintained a reflexive approach throughout the study and carefully documented all procedures and decisions related to project activities. Also, acknowledged the limitations and potential biases in the study and took steps to minimize their impact. The next section is the summary of the methodology chapter.

3.9 Summary

The research study adopted a mixed epistemological stance, integrating both constructivist and constructionist perspectives. The ontology emphasized the value of stakeholder engagement and co-creation of knowledge as essential components for problem resolution. To achieve this, a participatory and collaborative action research approach was chosen. The study's axiology aligned with ethical standards, prioritizing an empowering environment for positive change among company participants.

The action research approach effectively addressed the research questions by engaging stakeholders to co-create knowledge, which helped (1) define focus areas, (2) identify necessary actions as future recommendations, and (3) define implement steps through continuous mitigation of anticipated challenges. The action research was executed in three cycles, using an emergent approach. Each cycle addressed one research question. The findings per each cycle, as actionable knowledge, are explained in chapters 4-6.

Ten senior stakeholders were engaged in each cycle, except for the first cycle, which included 12 participants due to the need for collecting financial perspectives and validation of cycle 1 findings versus service line strategy. Qualitative data were collected using semi-structured interviews, and an inductive thematic method was applied for data analysis. To ensure research quality, reflexivity was incorporated, addressing the researcher's influence and potential biases on the study. Any encountered challenges or limitations were handled through ethical considerations, transparency, and open communication with the participants.

The subsequent chapter presents the literature review, exploring existing organizational disciplines and concepts related to the workplace problem. This deepens the understanding of the research business problem and identifies areas of potential gaps.

4 Chapter 4: Cycle 1 – Defining Action Research Focus Areas

4.1 Introduction

This chapter presents the first cycle of action research, that addressed the first research question: what are the focus areas in a cloud computing company to achieve operational efficiency in a service line of business? The findings present the **focus areas** that influence the achievement of operational efficiency of the service line, as defined by the research participants. This chapter is split into three parts. Part I, presented in Section 4.2, concerns the participants' views, findings and outcomes. Part II, presented in Section 4.3, provides a discussion of the outcomes; furthermore, as Cycle 1 was conducted in three iterations, this allowed some of the participants' feedback to be clarified. Finally, the chapter ends with a summary (Section 4.4).

In cycle 1, the interviews were executed with 12 participants: five with sales-service roles, five with project delivery roles, one with the financial partner of the service line, and one with the regional service line leader . The interview with the finance partner was to obtain his views on the performance indicators from a financial perspective and to understand the acceptable business benchmarks for the service line to be operationally efficient. Appendix E explains the service line key performance and success indicators, these are (1) revenues, (2) costs, (3) margin, (4) services-sales bookings, (5) subcontractor costs, (6) project delivery average daily rate (ADR), and (7) employee utilisation as well as the cloud consumption contribution as a success indicator.

In the study, 'majority' refers to a viewpoint shared by more than half of the participants, while 'minority' represents a perspective held by less than half of the participants. The majority indicates a degree of consensus among the engaged participants, it could reach 60%-80% or more. In the data analysis process, initial ‘codes’ were identified in the collected data, which are basic elements of information that appear to note. Codes were generated by reading and re-reading the interview transcripts and noting the patterns or recurring concepts. These codes were then grouped into broader categories, which are called 'themes', the grouping was based on the codes’ relationships and patterns. These themes provide a more comprehensive understanding of the data. In the subsequent sections, codes and themes are mentioned in the conclusions of the sections and subsections.

Cycle 1 was conducted in three iterations. The first iteration revealed the key perspectives shared by each of the participants. The second iteration was to obtain the views of each participant about the interpretations (initial codes) and shared perspectives of other engaged participants, for instance, one stakeholder shared the idea of team cohesiveness. The second iteration allowed defining the majority and minority of the opinions, which resulted in defining the key themes. The third iteration was about the final conclusion and building the consent about the working culture (foundations for success) layer which is presented later in the subsequent sections. During the analysis process, a member-checking approach was followed to validate the findings. This involved conducting quick check meetings either online or over phone calls.

4.2 Part I: Cycle 1 Participants' Views, Findings & Outcomes

This section is organized into four subsections, which seek to understand the participants' views on when operational efficiency is achieved (4.2.1) followed by the three focus areas (key themes) suggested by participants. These focus areas are project delivery excellence (4.2.2), cost optimisation and sustainability (4.2.3), and the growth of cloud services-sales bookings and cloud consumption (4.2.4).

Note: Section 4.3.3 illustrates the addition of the foundations for success (working culture) as a key theme, after the third iteration of interviews.

4.2.1 When is Operational Efficiency Achieved & Most Influential Indicators?

Most interviewees suggested focusing on the highly impactful key indicators that influence the achievement of operational efficiency. This was illustrated by member MS5 (project delivery role), who stated the following:

"In my view, achieving operational efficiency should be relative, which means a measurement of any improvement to the existing performance indicators that can lead to an inclining curve year over year [YoY] until reaching a gate margin set by the corporate, which could be 25% margin as usually shared by our finance department. Also, consider the success indicators that the service line can do, which can be contributing to cloud consumptions or cloud revenues, or achieving better client satisfaction".

Member MS11 (finance role), mentioned the following:

"There is a relationship between the performance indicators related to the service business line. If I start by revenue per head, it should be planned as US $300,000/ head/ fiscal year in a region like the Middle East, especially the Gulf States and Saudi Arabia. A healthy performance means that recognised revenues versus active backlog [which is the signed contracts not delivered yet] should be in the range of 35%. In more details, if we have signed contracts not delivered yet of total of 10 million dollars, then the business line should target to deliver at least 35% of it, which can set a revenue target per the business line of 3.5 million dollars. The more percentage means a lack of sales booking performance, as it means that the service business line tends to deliver projects faster than the growth of the backlog, which is the signed contracts ready to be executed or delivered".

He elaborated this further as follows:

"The profit margin is crucial as low margins could tie the ability to invest in hiring more employees further. The corporate strategy team set 25% as a minimum margin to achieve. My recommendation is that business leaders should not look to cut costs, but rather explore how to grow revenues".

Reflexive note, during analysis, MS11 stressed the importance of growing services-sales bookings as it will directly increase the project's backlog, thus improving the chances of growing revenues. Hence, at the moment of limited backlog and *booking, services-sales bookings is the priority as it drives the growth of the service line.*

Most interviewees agreed that the focus areas of the research should be on maintaining project delivery excellence, optimising costs, and growing services-sales bookings, focusing on measuring client satisfaction and loyalty during the engagement lifecycle. MS2 (sales role) illustrated this by stating:

> "*In my view, the most impactful KPIs on operational efficiency are project costs, sales booking, and delivery excellence that contribute to revenue generation. Every client is looking to optimise costs. Hence, they seek service companies that can provide the expected quality at optimised costs".*

Furthermore, MS1 (sales role) mentioned the following:

> *"We lack the measurement of client satisfaction or loyalty as a key success indicator, which depends on the consultant who delivers the work. The company is encouraging now to use NPS [Net promoter score] for this purpose".*

Delivery excellence was agreed by the majority of the interviewees to override the revenue performance indicator, as the business line might generate high revenues from specific projects. Still, however, there is a possibility of no continuity with the client in future projects due to a lack of value and satisfaction. Hence, an indication of the business line's success depends on delivery excellence and the growth of financial revenues.

Reflexive note, during analysis, focusing on delivery excellence is more important than focusing on growing revenues. Growing revenues is not an indication of success as clients might not be loyal for future business or not realize the value they were expecting before signing the contract.

The participants illustrated that delivery excellence is aimed at revenue growth, employee impact, client value realisation, improved delivery quality through automation, and client loyalty. MS1 explained the effect of the employee as follows:

> *"If you ask me what the most critical factor to consider, I will tell you it is about how we build an employee that can deliver value to the customer. Impactful communication by the employee is a key toward his ability to succeed".*

MS9 (delivery role) said the following:

> *"People impact revenue as a business achievement. Hence, the quality of projects' deliverables and employee experience, especially the project managers, should be a focus area...".*

MS9 considered that management should focus on growing revenues rather than on optimising costs. He illustrated this by stating:

> *"Revenue, in my view, is more important than reducing costs. Hence, I see operational efficiency can be fixed by focusing on maximising the services-sales bookings rather than improving margins by cutting costs".*

Reflective note, during analysis, MS9 view matched that of MS11, namely focusing more on growing services-sales bookings to increase revenues rather than optimising costs through a cost-cutting strategy.

Most participants expressed the importance of controlling both project costs and hidden costs. MS8 (sales role) illustrated that by stating:

> "*The most important indicators to focus on are the revenue, optimisation of costs, including the project costs and hidden costs, and the services-sales bookings".*

The majority of the participants illustrated the importance of optimising direct project costs by delivering projects through low-cost but skilled and talented employees. The expectation is to have the highest possible expected delivery quality while taking care of the hidden and unexpected expenses that might arise during project delivery. An example of a hidden expense is product gaps not covered as part of the product's standard features and clients do not want to pay for it. MS5 stated the following:

"My view is that margin is an indication if things are fine or not, but we are talking mainly on the services-sales bookings, revenues and costs including both projects and hidden costs".

In addition, the majority of the participants suggested focusing on growing services-sales bookings as they represent the primary source of future revenues. MS1 illustrated this as follows:

"In my view, the growth of sales booking should be the number one indicator, as revenues cannot grow without having signed contracts in place. Without having a backlog [signed contracts not delivered], then how can the revenues grow?".

MS2 (sales role) offered a further explanation:

"In calendar year 2021, the percentage of sales colleagues within the business line versus the delivery colleagues [including project managers, technical consultants and architects] was 7%. It was clear that there is high risk as the revenue burn rate for that year was 45% [which is the percentage of revenue out of the total backlog]. That was a serious risk as a lack of services-sales bookings or decelerating rates of winning new contracts can lead to having redundant delivery colleagues [delivery employees without utilisation]. Hence, my view is that the percentage of sales versus delivery colleagues should be around 14 to 15% to ensure enough geographical coverage and accelerating winning rates".

*Reflective note**,** during analysis, Low sales coverage can lead to project delivery employee redundancy due to the high risk of sales growth deceleration. The reasonable percentage could be in the range of 14%–15% of the local practice head counts.*

Majority suggested replacing employee retention by attraction tools which could ensure highly competent employees within the service line. This was illustrated by MS4 (delivery role), who stated:

> *"The service line should replace the employee retention process by employee attraction. Employee attraction allows other benefits to the employee that can take care of his or her well-being, lifelong learning, and work flexibility. I mean by the flexibility that an employee can work from any place he wants, and he should be the one who controls his time as long as the business objectives are met".*

Minority of the participants suggested focusing on utilisation as an indicator, as illustrated by MS10 (delivery role):

> *"My view is to limit the indicators to focus on revenue, project costs, and people utilisation".*

However, that was a divergent view from the majority.

Section 4.2.1 Concluding note: The most impactful indicators (key themes) are services-sales booking, delivery excellence, and project cost optimisation. The major identified themes were as follows: Services-sales Booking Growth, Delivery Excellence, Cost Optimisation and Cloud Consumption Growth.

4.2.2 Delivery Excellence

This section further elaborates on participants' views related to delivery excellence from their perspective as well as what the key components of such an indicator are.

MS5 illustrated the importance of a project delivery excellence, which is key to improving customer loyalty through the received value acknowledged by the customer. He stated the following:

> *"The employee creates an impact on the customer according to the customer needs and business challenges. Hence, my suggestion is to focus on project delivery excellence to improve customer experience…".*

As per the majority of interviewees, delivery excellence has pillars or components to focus on. These are talent acquisition and learning, client impact and loyalty, and cloud revenue growth, which are elaborated on in the following subsections.

4.2.2.1 Talent Acquisition & Learning

The majority of participants mentioned employee skills as a reason for improving the value impact to the customer that can lead to client loyalty and satisfaction. MS2 said the following:

"In my view, we should focus on the processes that could reduce delivery costs, increase services-sales bookings, and improve the quality of projects' delivery. On project delivery, it includes hiring people with the right skills, strengthening their knowledge gain, and measuring their delivery quality to the clients. Client satisfaction with continued future projects could indicate the employees' delivered value and how much they are satisfied with the project deliverables' quality; this is a sign of client loyalty".

Delivery excellence can be directly impacted by talent acquisition and learning growth. MS2 illustrated this as follows:

"On the delivery side, the selection of talents and knowledge growth are two essential items to consider. Client satisfaction will happen if the value received by the client meets his needs".

In addition, MS7 (sales role) spoke about the impact of talented employees and the difficulty in the knowledge-sharing process:

"Most of our businesses grow based on the stars [most talented and knowledgeable employees] in our teams, you can name them as disruptors. Key resources are crucial as you see our clients expand the business depending on their amount of satisfaction with specific resources".

He also said:

"Most of the key resources don't share their experiences easily, some of them are afraid to lose their critical advantage being a key experienced

person, or they don't have the motivation to share. This is an area to think about it".

Reflective note, during analysis, knowledge sharing should be a part of employee objectives. A mechanism to encourage it should be in place.

While talent acquisition is important, as is the continuous learning process, MS4 also highlighted the importance of talent retention and attraction by stating the following:

"You need to think about talent retention and attraction, and how to protect them staying in the company as, in the end, we sell their experience. I suggest focusing on employee retention and developing attraction rather than employee satisfaction [Attraction are the competitive tools that a company can provide to support employee growth, innovation and working flexibility rather than having satisfaction about his job pay. Satisfaction can retain the employee but not enough to increase productivity]".

MS8 elaborated further on what employee attractions mean as follows:

"Employee attractions are the tools that make an employee enjoy his/her job. For instance, it could be an external training course in one of the top universities or training centres. This is lifelong learning. It can be the work flexibility that can allow an employee to control the time and location of work...".

Subsection 4.2.2.1 Concluding Note: This section elaborated further on talent acquisition and learning, addressing the importance of hiring talented digital disruptors, developing talent attractions and encouraging knowledge sharing. The identified codes were as follows: Knowledge Sharing, Hiring of Talented Disruptors, Development of Talent Attractions, and Lifelong Learning.

4.2.2.2 Client Value Realisation & Loyalty

Having the right talent and a plan for their continued learning is part of delivery excellence, but they are not sufficient. MS10 highlighted the importance of qualifying projects before deciding whether to bid for one:

> *"Project qualification is essential to be considered. We must focus on what can we deliver as value and not accepting every type of request coming to deliver, this is the way a delivery team can show value and clients can realise it".*

MS5 spoke about the transition phase of handing the sales order to the delivery team, and also highlighted the importance of having the delivery teams understand the client's pain and what value is expected from the project:

"Improvement of the delivery process should consider carefully project initiation activities, especially in understanding the business pains, client needs, and how the sold scope can show the customer's expected value".

Furthermore, MS6 (delivery role) said the following:

"In many cases, we see deviations in a large transformation project from the expected value versus sold scope".

Reflexive note, during analysis, deal qualification is crucial in deciding whether the service line can show value to be realised or not to the client.

MS5 stressed the importance of appraisal management, which must factor the actual impact of an employee with clients, by suggesting the following:

"It is important that the service line leaders focus on the process of appraisal management and add criteria that measure the client success or loyalty, and such collective outcome should be an input to the appraisal process evaluation".

MS8 spoke about the importance of measuring client loyalty by assessing the client's need versus the received value, which must be part of the employee appraisal process:

"Client loyalty is very important. We need to measure client need versus value received and how to measure client loyalty and link it to the employees' performance evaluation. NPS [Net promoter score] is the answer, it is a very simple form and can just take a few minutes to give

feedback. Getting an NPS below 9 means there is an issue that requires management intervention. Below 9 means the client is not willing to be a future advocate or accept being a reference to future prospects".

MS4 suggested that NPS should be measured after each project phase as part of the phase exit interview by stating the following:

"My suggestion to enhance the project management methodology used in our projects, by adding the NPS form as part of the phase exit deliverables. It should be kept as simple, just collecting a score and a free text feedback. Management should track the NPS trend in all project phases…".

Subsection 4.2.2.2 Concluding Note: This section emphasised the importance of dealing with the qualification criteria as part of client value realisation planning, and also the importance of adding the NPS as part of the project phase exit reviews to understand the client loyalty score. The defined codes were Client Value Realisation and NPS.

4.2.2.3 Cloud Revenue Growth

MS4 illustrated the importance of understanding the revenue impact for each employee as follows:

"It is important to understand the employee impact per each of the key performance indicators, especially cloud revenues. There should be a process to report how much revenue is generated per head".

While the services catalogue was illustrated as an essential pillar that affects revenue growth, the majority of interviewees suggested reassessing the existing services catalogue before deciding to add new services, potentially expanding it to add everything-as-a-service (XaaS). MS3 (sales role) mentioned the following:

> *"On the service catalogue, we need to improve existing services to make them more efficient and valuable to clients rather than introducing new services to the market. Think about our quality to deliver services versus the expected value that clients look at".*

MS5 illustrated this as follows:

> *"I can't judge the effectiveness of the service offerings without analysing the existing services catalogue and how useful each service is and its contribution to the total revenues".*

Moreover, MS6 encouraged the building of packages that can reduce the implementation time, such as what the service line has today in terms of the reusable assets innovation portal (IP). It is used as internal software solutions store that provides packed solutions that can be deployed at less time and cost, which MS6 explained as follows:

> *"Standard solution packages that have reduced implementation time from previous experiences is good, but we need to think about the adoption needs".*

MS3 suggested thinking about XaaS, which is Everything-as-a-Service, as a future direction:

"This is important, and the world is moving in that direction, which we need to think of as a future direction and be ready for it. It will come sooner or later, and the service line has to be ready for it. This can be part of the innovation service portfolio offerings".

MS8 considered XaaS to be the future of cloud technology, but believed that it would take time in the Middle East region (e.g., 3 years), which was explained as follows:

"XaaS is important, but I see the level of maturity in our region is still behind...".

MS1 expressed the importance of XaaS as follows:

"Everything-as-a-Service is an interesting topic to consider for the market".

XaaS concept was a divergent theme as it did not receive the majority of the views.

MS9 expressed the importance of the "Techcelerate" program, created by EMEA management, by stating the following:

"Techcelerate encourages the project managers to re-think out-of-box, by trying to position the use cases that can benefit the client, and at the same time it can accelerate the cloud consumptions…".

MS5 suggested adding the Techcelerate program as part of the program managers' objectives. He stated the following:

"Project managers' role has to be transformed into engagement managers, which means they have to own business KPIs [Key Performance Indicators] growth objectives".

MS4 suggested combining the Techcelerate program with another global program called "Imagine" to grow cloud revenue. He stated the following:

> *"My view is that project managers/engagement managers should use the available company tools to grow cloud revenues. For instance, the Imagine Program is designed to deal with the client c-suite and decision-makers to co-design the client strategy roadmap for 2–3 years".*

Subsection 4.2.2.2 Concluding Note: This section emphasized cloud growth through transforming the project manager role using company tools, such as reusable assets, Techcelerate, and Imagine; setting a revenue target per employee; and introducing innovative services. The defined codes were as follows: Cloud Revenue Per Head, XLA, Service Catalogue Effectiveness, Reusable Assets, Techcelerate, Imagine Strategy Workshops, and Engagement Managers Role.

4.2.3 Cost Optimisation & Sustainability

This section further elaborates the participants' views related to cost optimization and sustainability as well as the components that influence this indicator.

With the current economic dynamics due to the COVID-19 pandemic, participants recommended that service line leaders should adapt to these dynamics by finding talents at low-cost remote centres having many clients accepting remote delivery as an approach for executing project delivery activities. MS3 explained this as follows:

"*Client purchasing behaviour has been changed, especially with the recent COVID-19 pandemic that needs to be looked at in our processes as it can provide opportunities to exploit in terms of improving efficiency".*

Furthermore, MS1 said the following:

"Customer purchasing behaviour is changed during the COVID-19 pandemic. Our service line needs to think about business model changes as COVID-19 gave more flexibility to deliver the work remotely".

Reflexive note, during analysis, learning from the COVID-19 experience can support delivery cost optimisation through the use of remote delivery centres due to the elimination of travel and local transportation or accommodation expenses. This would also help to reduce costs as well as support sustainability (through reducing carbon emissions due to the air travel and transportation required for onsite delivery).

MS4 expressed the importance of hiring skilled people and creating reusable packages for matured services:

"To achieve operational efficiency, we should reduce the dependency on people, but such depends on the level of maturity of the services. I think that once a service

is matured, it should be packaged to expedite its deployment at optimised costs. We need to find the highest skilled resources rather than the cheapest resources as they can give better efficient results".

MS5 expressed the importance of remote delivery centres for improving the service-line margins as follows:

> *"Remote centres provide the chance to get highly competent employees to deliver projects at lower costs. The challenge is how to find these highly competent calibres in the low-cost centres that we have in India, Egypt and Greece. There should be a planning integration between the local practice and remote centres, in which local practice management can share their expectations in what domains, skills and solutions that are needed to focus on".*

MS7 mentioned that the COVID-19 pandemic had a positive impact as it encouraged the concept of distance or remote project delivery:

> *"Prior to COVID-19, most of the projects in the region used to be on the basis of 30–40% onsite delivery and the rest is remote. During the pandemic and social distancing rules, the clients accepted to have 100% remote delivery, it worked fine, and the projects were delivered successfully. Such an outcome encouraged the clients to accept increasing the remote delivery percentage to 90% or 100%".*

He also stated the following:

"Remote delivery aligns with the service-line sustainability strategy program. The aim is to deliver green projects with zero carbon emissions, and the first phase is to focus on air travel and transportation reductions".

MS1 expressed that remote delivery allows the company to reduce delivery costs and provides a competitive offering to the market:

"COVID-19 allowed selling projects at least 20% less, which is the average onsite delivery costs. So, offerings are competitive. Also, delivery using remote centres can save the time and effort of delivery employees required in the onsite meetings, transportation, etc…hence I can say that the performance of remote employees was much better if compared to onsite projects. Still, onsite delivery will be required after the pandemic, but for urgent matters, and critical executive meetings that require face-to-face interactions".

MS9 considered that remote delivery cannot be considered in some industries:

"Remote delivery might be a challenge in industries like the Military and Government. The same applies to the intelligence departments".

However, he considered remote delivery a great step toward achieving sustainability objectives:

"Every client now, especially those who have international operations, is keen on sustainability. Sustainability allows to reduce and optimise costs, as well as opening the door to new business opportunities".

MS4 expressed that physical-interaction roles will continue in the cloud adoption process, in end-user training, and in change management, while other project activities can be automated. He stated the following:

"Physical-interaction roles are required for the adoption and end-user training as well as change management, all of these are client-facing roles. Other project activities can be automated with less dependency on humans. For instance, the created cloud migration automation tools are used to automate the migration from non-cloud to cloud systems with a major reduction of human efforts up to 70%".

Section 4.2.3 Concluding note: Cost optimisation is defined as an emergent key theme, it can be achieved by increasing dependency on remote centres for project delivery. This is aligned with the global sustainability objectives and market behaviour changes after the COVID-19 pandemic. Defined codes were as follows: Green Projects (Sustainability), COVID-19 Impact, Highly Competent Low-Cost Remote Centers, and Delivery Excellence Alignment.

4.2.4 Growth of Service-Line Services-Sales Bookings & Cloud Consumption

Most participants believed that the growth of services-sales bookings and cloud consumption should be the highest priority area of focus. MS1 stated the following:

> *"Without the growth of bookings, revenues cannot be delivered. Sales employees present the front arrow of the service line, it is important to ensure that the right sales coverage is in place and such coverage is organized in the high potential cloud business growth territories".*

The participants agreed that cloud consumption is the most critical success indicator set by the company's top management, as it directly affects the stock price and the company's market position. MS3 illustrated this by saying the following

> *"Cloud consumption is the number one key success indicator. Accelerating cloud consumption contributes directly to growing the cloud recognised revenues, and hence achieving the objectives of both the stockholders and the company stakeholders. Cloud revenues cannot grow without growing the cloud services-sales bookings".*

Interviewees' feedback regarding how to increase services-sales bookings and cloud consumption focused on three ideas, namely the type of projects and sales coverage to focus on, cloud transformation through business line assets, and new services.

4.2.4.1 Type of Focused Projects & Sales Coverage

MS2 illustrated how the business line should focus on three different types of projects as follows:

"On the sales side, my view is that the service line should focus on three categories: (1) Projects that have new technology or specialisation that require skills and don't exist easily in the market; (2) projects that are bleeding (meaning projects with potential scope and time creep) with other implementors that need the service line to step in to save the project; and (3) clients that ask for the service line by name to deliver the project delivery".

MS6 suggested a focus strategy for managing the sales coverage challenge:

"Sales coverage can be a challenge, for instance, if the number of sellers is five, how can they cover nine countries in an efficient way? My view is that the focus should be on the locations where the company has public data centers. Also, those places that have high potential growing industries, such as healthcare and digital banking".

4.2.4.2 Transformations via Reusable Solutions & Company Initiatives

Majority of interviewees suggested that capitalizing on business line assets can result in the replication of cloud transformational projects with other clients in different countries. MS6 described this as follows:

"The implemented use cases, and business line reusable assets have an important positioning advantage, which is the time to deploy at reduced costs. That can accelerate the cloud consumption and assist the clients to achieve their business objectives at a faster time".

MS1 suggested establishing a sales play portal per industry to position the reusable solutions:

> *"While reusable assets are published in an internal portal called – innovation portal (IP). However, it needs more improvement to capture the high-impacting solutions per industry... It is important to focus on increasing awareness of what solutions exist as part of the reusable assets, as it can be a quick win".*

The majority of participants agreed that integrating with the company's global initiatives is crucial for growing the cloud services-sales bookings. MS4 illustrated this as follows:

> *"When focusing on corporate initiatives, it allows that all business lines work in the same direction, which increases the winning chances to convince clients to go with the sales positioning. For instance, 'Win The Platform' (WTP) initiative that targets 20 clients in the region, that would be the sales employees' priority to focus on".*

Furthermore, MS7 suggested the integration of the WTP and Techcelerate programs to increase the value proposition:

> *"I see the importance of WTP initiative, as it targets the most critical clients that can transform to the cloud. If we integrate WTP with Techcelerate, then the service line can position the reusable assets as part of the sales cycle value proposition,*

which in turn can improve the chances of convincing the decision-makers about the value".

MS9 illustrated the impact of corporate initiatives on the company stock price as follows:

"*It is clear to the market, that the stock price goes bullish as long as the cloud revenues are growing, and that cannot be achieved without the growth of services-sales bookings. Management has the 'Techcelerate' program for this purpose to focus on growing and accelerating the cloud revenues by co-planning with customers and showing them the value of the various cloud offerings*".

Section 4.2.4 Concluding note: Growth of bookings and cloud consumption is defined as a key emergent theme, as the most influential indicator of operational efficiency. It involves increasing sales coverage, capitalizing on service-line assets to create transformation projects, and integrating with corporate initiatives, such as WTP and Techcelerate. The defined codes were as follows: Type of Projects, Sales Coverage, Focus on Cloud Transformations, Reusable Assets, Use Cases, Win The Platform (WTP), and Techcelerate.

The next section illustrates the emergent themes and defined codes, and areas of alignment with literature.

4.3 Part II: Cycle 1 Discussion of Outcomes

This section is organized into two parts. These are emergent themes, defined codes, areas of alignment with literature, and reflections on cycle 1 findings with stakeholders.

4.3.1 Emergent Themes

Table 4.1 explains the emergent themes and codes in a categorized format. The KPIs are the parent categories, each of which is followed by the possible broken-down themes. The left column lists the majority agreed themes with the list of generated codes, while the right column lists the minor agreed themes:

Table 4.1: Cycle 1 Emergent Themes Stating Majority and Minority Views of Engaged Participants

	Majority Agreed Themes & Codes	Minority Agreed Themes & Codes

1	Project Delivery Excellence (Key Theme)
	• Talent acquisition & learning (Code Group)
	  o Impactful Talented Disruptors
	  o Talent Attractions
	  o Competent Remote Centres
	  o COVID-19 Impact
	  o Knowledge Sharing
	  o LifeLong Learning
	• Client value realisation & loyalty (Code Group)
	  o Client Value Realisation
	  o Net Promoter Score (NPS)
	• Cloud revenue growth (Code Group)
	  o Cloud Revenue Per Head
	  o Service Level Agreement (SLA)
	  o Experience Level Agreement (XLA)
	  o Service Catalogue Effectiveness
	  o Reusable Assets
	  o Techcelerate
	  o Imagine Strategy Workshops
	  o Engagement Managers Role
		Margin (Key Theme)

2	Cost Optimisation & Sustainability (Key Theme) • Green Projects • COVID-19 Impact • Highly Competent Low-Cost Remote Centres • Delivery Excellence Alignment	Average daily rate (ADR) (Key Theme)
3	Growth of Sales Booking & Cloud Consumption (Key Theme) • Type of Projects • Sales Coverage • Focus on Cloud Transformations • Reusable Assets • Use Cases • Win the Platform • Techcelerate	Utilisation (Key Theme)
4	--	Subcontractor costs (Key Theme)

The participants agreed that the focus should be on services-sales bookings growth, delivery excellence, and cost optimisation. A minority of participants mentioned the margin, ADRs, utilisation, and subcontractor costs. The participants also agreed that the growth of cloud consumption is a key priority hence the growth of services-sales bookings should focus to achieve that, hence both are linked. Sustainability is a global direction and can support cost optimisation objectives, hence, the two can be linked.

Starting with the growth of services-sales bookings and cloud consumption, the participants emphasized the importance of having the right sales coverage in the potential territories that have cloud momentum growth. Territories can be either a location (e.g., Saudi Arabia) or an industry (e.g., the public sector). A territory can even be a client if significant potential growth can be achieved through them. Growth can also be achieved by replicating successful cloud transformation stories through capitalizing on the service-line reusable assets and use cases as well as utilising company initiatives.

While project delivery excellence alone is not a performance indicator, participants expressed its importance instead of simply targeting revenue growth since it is wider. Delivery excellence is meant to ensure that the right talents are hired, high customer loyalty scores are achieved, and planning workshops with clients are held to realise the value of what was purchased versus client expectations. Furthermore, delivery excellence involves planning revenue growth plans with clients and achieving revenue growth.

The key to cost optimisation and sustainability is to encourage the transformation of remote project delivery centres to ensure the existence of highly competent employees at low cost. For instance, an employee of the same job grade level hired in Egypt can cost less than one-third of the same employee in the United Arab Emirates or Saudi Arabia. The impact of the COVID-19 pandemic and sustainability encouraged to maximize the use of remote delivery due to the need for social distancing, and an aim should be green projects with reduced carbon emissions that can result, for instance, from air travel and local transportation.

One of the challenges for business leaders in a service line is to understand how to set business targets to maintain operational efficiency. One of the key outcomes of cycle 1 was to know how to set targets in a simplified form for an existing service-line practice. Appendix G explains the steps toward setting efficient targets in detail.

Section 4.3.1 Concluding note: The focus areas are the growth of services-sales bookings and cloud consumption, project delivery excellence, and cost optimisation and sustainability.

Appendix F illustrates reflections on cycle 1 outcomes and the literature review.

4.3.2 Reflection on Cycle 1 Outcomes with Service Line Leader & Engaged Stakeholders

This subsection illustrates two reflections after analysing cycle 1 data that were discussed, as a third iteration, with the stakeholders, and related to the validation of the outcome versus the defined strategy of the service line, and the results' impact with the working culture.

First, cycle 1 findings raised an important question to be elaborated further with the service line regional leader of EMEA, about the difference between a service line specialized in cloud computing technology, and another service line that is non-cloud focused oriented since the focus areas (emergent key themes) might look the same in both on what needs to be done to maintain operational efficiency.

This is important as the outcomes of cycle 1 might be confusing since it can also be applicable to a non-cloud computing service provider as a concept if excluding the word ‘cloud’. Yes, it is true that the outcome has a cloud impact related to the key performance and success indicators. However, such an outcome requires more explanation to understand what it exactly means in a service line of a cloud computing company. For that purpose, such a question is asked to MS12, (regional service line leader), and he says, *"Cloud growth is what matters to the company headquarters management, simply it is what drives the stock price of the company. The aim of the service line is to 'Move' & 'Build'. I mean by 'Move', is to move the client's workloads from a non-cloud environment to the company cloud data centers. Such workloads can be applications, databases, custom developments, and reports.*

The second one is about 'Build', and I mean here building innovative solutions using the cloud tools. For instance, a government wants to automate the election process, the service line can provide a cloud solution that implements the requirements. I mean by cloud solutions here, any customer requirement that needs to be developed, can be one process, or multiple processes."

He adds,

"To understand the difference between both – 'Move' & 'Build'. Both are important, but 'Move' does not take much time to be implemented, hence it can result in fast cloud consumption, also it does not cost the clients much compared to 'Build', especially for a complex solution, as the service efforts are not that high compared to the 'build'. The 'build' takes more time to deliver and is more expensive to clients due to the required efforts depending on the level of complexity."

Second, after presenting the finding to the stakeholders, the generated codes indicated common codes related to the working culture, which the stakeholders, named as the foundation for success. Examples of these codes are cohesiveness and talent attraction tools. Hence, they emphasized the importance to add a foundation layer as part of the cycle 1 focus areas framework which is illustrated in Table 4.2:

Table 4.2: Cycle 1 Findings - Operational Efficiency Focus Areas Framework

	Cycle 1 Findings - Focus Areas
1	Foundations for Success (Working Culture)
2	Growth of Cloud Services-Sales Booking and Cloud Consumption
3	Project Delivery Excellence
4	Project Delivery Cost Optimization and Sustainability

Section 4.3 Concluding note: This section addressed defined key themes and generated codes, areas of alignment with literature and cycle 1 outcome, and reflections on the findings with the engaged stakeholders including the validation of outcomes versus company service line strategy, and relation with working culture.

4.4 Chapter 4 Summary

The results indicated four focus areas, as key emergent themes, that have a significant impact on operational efficiency, namely (1) Foundation for Success (Working Culture) (2) the growth of services services-sales bookings and cloud consumption, (3) project delivery excellence, and (4) project delivery cost optimisation and sustainability. The stakeholders indicated that delivery excellence is broader than just focusing on revenue growth performance indicator as it addresses other aspects, such as project delivery value realisation and client loyalty, through measuring the NPS. Moreover, the participants expressed the importance of the value of an employee as he is the one who influences the efficiency of the performance indicators, and they suggested replacing the employee retention process with employee talent attraction tools.

Regarding the growth of services-sales bookings and cloud consumption, the participants emphasized it is the most critical indicator as it drives revenues and without it there are no projects to deliver. The results indicated that COVID-19's effect encouraged remote delivery through remote nearshore and offshore centres, which aligns with the company's sustainability objectives (delivering projects with limited carbon emissions). This sets a priority for offshore and nearshore (local language support) remote centres to find the right competent employees.

The interviewees demonstrated enthusiasm for critical thinking, as they recognized the potential for suggesting areas of improvement within the service line. Throughout the interviews and member-checking sessions, stakeholders were encouraged to share their insights and ideas for enhancement. Open-ended questions were posed, enabling stakeholders to fully express their thoughts. It was evident that they believed in their ability to contribute to the company's success by establishing an effective framework.

The outcome of cycle 1 provided the answer to the first research question on what the focus areas are to achieve operational efficiency. It set the ground to start cycle 2 which focuses on what actions need to be considered in each focus area. The next chapter addresses the outcome of the second action research cycle and defines the recommended actions per each of the defined focus areas resulting from the first action research cycle.

5 Chapter 5: Cycle 2 – Defining Recommended Actions Per Focus Areas

5.1 Introduction

This chapter presents the findings of the second action research cycle, and its outcome defines the recommended actions to be implemented per the focus areas defined as the outcome of cycle 1 (illustrated in Table 4.2). Cycle 2 focused on answering the second research question on what recommended actions to implement per defined focus areas and the priority of implementation, as future recommendations. To recall, cycle 1 findings emphasized focusing on four areas, these are the foundation of success (as working culture), growth of cloud services-sales bookings and cloud consumption, project delivery excellence, and project delivery cost optimization and sustainability, in relation to four business pillars, these are employees, customers, business process and sustainability.

The interviews were conducted with 10 participants in three iterations. The first iteration revealed the key perspectives shared by each of the participants on recommended actions to be implemented. The second iteration was to obtain the views of each participant about the interpretations and shared perspectives of other engaged stakeholders which allowed defining the majority and minority of the opinions, resulting in defining the key themes. Also, cycle 2 interaction 2 emphasized the priority of implementing the action and the suggested sub-action per each recommended action. The third iteration was about the sub-actions of each of recommended actions. During the analysis process, a member-checking approach was followed to validate the findings. This involved conducting quick check meetings either online or over phone calls.

The approach employed in Cycle 2 was cyclic and inductive. This approach facilitated the observation of emergent themes through an iterative process of data collection and analysis. The inductive approach allowed the exploration and identification of emergent patterns, insights, and themes that emerged directly from the data itself, without imposing any predetermined data. It is important to note that the literature review findings were not imposed on the participants, ensuring that their views remained unbiased. Instead, the interview protocol prompts (Appendix B) were carefully facilitated open-ended discussions and gather stakeholders' views on relevant topics, such as the concept of Net Promoter Score (NPS) and its potential impact on operational efficiency.

This chapter is composed of two sections. The first section is about cycle 2 participants' views, findings, and outcomes, while section two is about the discussion of outcomes.

5.2 Cycle 2 Participants' Views, Findings, and Outcomes

This is section is organized into four parts: (1) foundation for success actions (working culture), (2) growth of cloud booking and consumption, (3) project delivery excellence, and (4) project cost optimization and sustainability. At the end of each part, the priority of implementation is illustrated. The view and outcomes are discussed in relations with business pillars of employees, customers, business processes, and sustainability.

5.2.1 Foundations for Success (Working Culture) Actions

Participants illustrated the importance of building an environment for success before implementing actions for the growth of the key performance indicators, and they defined four recommendation actions. These actions are required to establish the foundation of success, presenting the working culture, in terms of cohesive culture, talent attraction tools, clear objectives and aspirations, and execution excellence and quality.

Promote Cohesive Culture and Positivity

Majority of participants agreed that a critical component of foundation actions is promoting cohesiveness culture and positivity. MS7 illustrated that by saying,

"There are foundations that are needed to be established first, and it might be a challenge toward achieving operational efficiency within the service line. I say a challenge because of the past history over the last years; some of the colleagues might be having a trust challenge about the service line's fair compensation and the space given to employees to innovate. They might be feeling that they are not well recognized or even well paid. I recommend establishing such a foundation by promoting a cohesive team culture and recognizing positive actions. Cohesive means, in my view, to focus on trust as one team. Management has to capture positive behaviour of individuals, promote it, and recognize it to encourage other colleagues to follow it."

Cohesive teams are the ones who have trust, have effective communication for conflict management, are accountable, and can commit and achieve business outcomes. Lacking the cohesiveness between the service line employee can encourage a toxic behaviour between the colleagues and each other which can impact the business outcomes.

As an analysis summary, the emergent theme is: Promote cohesive culture and positivity, supported by the following generated codes:

- Establish Trust
- Effective Conflict Management
- Commitment
- Accountability
- Achieve Business Results
- Promote Positivity
- Address Negativity
- Strategy Communication

Develop Talent Attraction Tools

The second component of foundation actions is developing talent attraction tools as agreed by stakeholders. MS1 illustrated that by saying,

"The service line has to create criteria of what technology talent should be hired. Such a service line should hire the digital disruptors in the market. In my view, such criteria

should be having those technology disruptors that can create value for the clients, have innovative ideas, have excelled in the product knowledge via the standard certifications that can be obtained through the company learning portal, and have positive behaviour. I always prefer to do reference checks about the candidate to hire from the market before hiring them."

As per the stakeholders' view, the service line talented employees should have market awareness, experience at least in one of the fast-growing industries, familiarity with the new technology, and the ability to compare the company products versus competition products and position the company services the right way. They should have excellent communication skills.

Such talents are always at risk of being lost to competition; hence, the service line should develop attraction incentives to them, for instance fair market compensation, recognition awards, and flexibility in working time and location, and provide them with adequate training required for them to achieve their career aspirations. They also should be given a space to innovate and express their views, thoughts, and ideas.

Reflexive note, during analysis, when hiring a new employee, he should be smart, humble in the sense that he looks for team success and not an individual success, and hungry to achieve positive business results. Talent attraction tools should have funding for lifelong learning; the company should pay the employee for that and encourage him/her to develop new skills. Managers should seize every opportunity to brand the employee's *success and encourage them; also, client's feedback should be collected on the employee and recognized in case of realized value by the client.*

As an analysis summary, the emergent theme is: Develop Talent Attraction Tools, supported by the following generated codes:

- Digital Disruptors
- Working Time Place Flexibility
- Space For Innovation
- Expressing Thoughts Ideas
- Client Impact
- Recognitions
- Lifelong Learning
- Fair Compensation
- Employee Branding
- Client NPS
- Hiring Process (Humble, Hungry, Smart, Criteria of a talent)
- Execute Talent Attraction Tools
- Communication Management (1–1 meeting, Recognition)
- Payroll Assessment.

Design Clear Objectives and Plan Career Aspirations

Majority of participants emphasized the importance of having clear objectives and career aspirations set with the service line employees.

MS2 explained what clear objectives are, by saying:

"Employee annual objectives have to be set and agreed at the beginning of the financial fiscal year. I have a situation where an employee does not have agreed objectives till the end of the year, then the employee gets evaluated by the manager just to meet the company mandate that a rating should be there. That is unfair to the employee. In my view, objectives should be SMART (Specific, Measurable, Achievable, Relevant and Time-Bound)."

As per the stakeholders, employee objectives should not be just achieving sales targets for sales roles or generating billable hours for delivery roles. Objectives have to be extended to employee learning development, knowledge sharing, collaboration with other business lines in the company, and contribution to sustainability objectives. These objectives have to be well documented in the employee profile, and the manager has to target two times a year to evaluate progress, the first time after six months to give feedback and recommendations, and the last one at the end of the fiscal year.

The service line can lose talented people mainly due to the lack of letting them achieve their career aspirations. Yes, some might leave the company due to better financial offers, but career aspiration planning and achievement are key.

MS5 illustrated further by saying,

"The company has an online portal that allows the employee and manager to document, discuss, and agree on the career aspirations plan. The manager should support the employee to achieve his or her aspirations. The career aspirations should be planned for two to three years forward and should include what the employee aims to do, how to achieve it, what kind of support/tools are needed, and the method to track progress."

Reflexive note, during analysis, the working culture should allow the employee to speak, dream, express thoughts and feelings, and not to be afraid to speak or dream; this is what will allow him/her to innovate and show client impact.

As an analysis summary, the emergent theme is: Design Clear Objectives and Plan Career Aspirations, supported by the following generated codes:

- Smart Objectives
- Diversified Objectives
- Career Aspirations.

Ensure Execution Excellence and Quality

The majority of participants agreed about ensuring execution excellence and quality related to the service line activities as a key action of foundations for success.

MS6 described execution excellence and quality as follows:

"Execution quality and excellence have some dimensions to think of. For instance, it is about the accuracy of forecasting the business KPIs, highlighting business risks and mitigations in a timely manner, and the quality of work deliverables to the level that if someone is asked about, the feedback is just perfect. Also, I think of having the business in control.

Also, suppose the employee is not submitting the operational reports on time. In that case, this is also an example of out-of-control business, such as submitting labour-effort timesheets, submitting expense reports on time, project progress reports, and risk reports."

Reflexive note, during analysis, the service line encourages the employees to take sustainability into action in their day-to-day execution activities, as part of the execution excellence and quality. For instance, reduction of paperwork, taking online training instead of in-class physical attendance training, avoiding large attachments in email inboxes, and using shared online folders to avoid replication of file sharing are all examples of sustainability as, at the end, it will reduce the computing consumption resources and save more energy sources.

As an analysis summary, the emergent theme is: Ensure Execution Excellence and Quality, supported by the following generated codes:

- Forecasting Accuracy

- Raising Risks Mitigations on Time
- Quality of Work Deliverables
- Business in Control Measures.

Priority of Implementation for Foundation Actions

In the second iteration of Cycle 2, the participants were asked about the priority of implementation of the aforementioned agreed four actions. The question was difficult to answer, as the majority expressed that all actions are important and can have an equal level of priority. This view was re-challenged during the interviews, and the majority agreed that actions regarding cohesiveness and talent attraction tools must start from Day 1 of the implementation. Then, clear objectives and execution quality or excellence can be implemented as a second priority, which can be three to six months after starting with Priority 1 actions.

MS3 explained,

"Without cohesiveness, there will be a lack of trust culture. I see cohesiveness as the energy that can drive the service line to success. Also, attracting the talent is of same priority to ensure the strength of the business line. Once trust is established and the talented employees are retained, then we can plan for the objectives and career aspirations and establish the right measures for work execution quality and efficiency. This can start three or six months after starting to implement Priority 1 actions."

In conclusion to section 5.2.1, Foundations for Success (Working Culture) have 4 recommendation actions as emergent themes. These are establishing the foundation of success, presenting the working culture, in terms of cohesive culture, talent attraction tools, clear objectives and aspirations, and execution excellence and quality. Minority themes were captured but did not obtain the consensus of the stakeholders, such as delivery roles are more critical than sales-driven roles within the service line, the reason that every role is critical toward achieving operational efficiency. Also, margins can influence cutting the budgets for training, that was not agreed since it affects the talent attraction tools.

5.2.2 Actions for Growth of Cloud Services-Sales Booking and Cloud Consumption

Participants suggested three actions to grow cloud sales booking and consumption: (1) sales coverage and selling of value-based solutions, (2) promotion of engagement manager role in cloud expansion and Techcelerate program, and (3) brand success stories.

Ensure Effective Sales Coverage and Value-Based Solution Selling

Majority of participants emphasized the importance of effective sales coverage and value-based solution selling. Sales territories are accounts grouped on the basis of geography, industry, or specific clients by name. The design of such sales territories and the establishment of sales coverage in terms of assigned service sales employees are critical for the growth and consumption of cloud booking.

MS6 explained,

"Sales coverage, in my view, is a challenge, as the more cloud revenue targets assigned, the more salespeople needed to cover them. In my view, and since our resources are limited, sales territories have to be designed in a way to focus on areas of potential cloud growth. For example, countries such as Saudi Arabia and the United Arab Emirates (UAE).

Then, within the high-focus countries, we should look at what project types we can target, which should be within three categories: clients who want the service line by name, clients who failed with other service partners and are in urgent need of our services, and clients who want to implement niche solutions which require skills that are highly likely to exist in the service line; for example, the service line is very specialized in automotive industry automation."

Reflective note, during analysis, Saudi Arabia and the UAE could have the priority of focus, then Qatar and Kuwait, since these countries have the most accelerated growth rates. In the assigned territories, the services salesperson can focus on the top clients from a revenue perspective; these are the types of clients who can have funds to invest in technology development and innovation.

Another Reflective note, during analysis, by recalling the company service line strategy about "move" and "build" focus strategy, and to accelerate selling, salesperson can think like the C-suite client decision-makers. Their decisions about transforming their *technology systems are either based on cost savings or generating new revenues and profits, or it can be time saving. For instance, a company plans to have cross-geographical operations and wants to have a centralized system that allows global access to its environment while maintaining the company strategy rules. Another example of what decision-makers do is automate their business operation processes to reduce operational costs. Hence, the service line use cases should be positioned the same way, which is the value in terms of reducing costs, saving time, or increasing revenues and profits, so clients can realize the value from it.*

As an analysis summary, the emergent theme is: Ensure Effective Sales Coverage and Value-Based Solution Selling, supported by the following generated codes:

- Sales Territories Design (Focus Territories, Focus Project Types, Focus Services)
- Value Based Service Selling (Cost Reduction, Revenue and Profit Increase, Saving Time)
- Employee Impact
- Employee Branding (Reusable assets, Experiences, Value-based selling)
- New Innovation Portal (Upload new valued use cases)
- Territory Planning
- Territory Assignment
- Use Case Value
- Innovation Use Cases
- Remote Sales Support (Proposal creation, Solution design, Sales collateral)

Promote Engagement Manager Role in Cloud Expansion and Techcelerate Program

The majority of participants emphasized the impact of the engagement manager role, which has an impact on both the revenue and services-sales booking performance indicators.

MS2 illustrated such importance of transforming the role of a project manager into an engagement manager, by saying

"We know a project manager role is about managing a project scope to deliver it within a certain time and planned budget, so it is about scope, time, and budget. However, in cloud services, such a role has to be promoted to new duties and be named as an engagement manager (EM). For instance, the EM should be the one responsible for developing the C-suite trusted relationship in the project he delivers, should contribute to the strategy discussions with C-suite decision-makers, and should advise them via the potential valued use cases. An EM should also take care of encouraging sustainability objectives by increasing the remote activities while retaining the value that the client expects. EMs should own the creation and execution of the cloud growth plan with their trusted customers."

Reflexive note, during analysis, an EM can co-set new objectives with his/her manager that reflect the cloud growth consumption, cloud services-sales booking impact, and client NPS measurement., in order to retain the client's *loyalty. Also, the EM can capitalize on company initiatives such as the Techcelerate program to accelerate the deployment of the valued use cases to the clients.*

As an analysis summary, the emergent theme is: Promote Engagement Manager Role in Cloud Expansion and Techcelerate Program, supported by the following generated codes:

- Transform Project Managers To Engagement Managers
- C-Suite Business Trusted Relationship
- Measure Client Loyalty (NPS)
- Create Execute Cloud Consumption Gross Plan
- Techcelerate Execution Owner
- Job Role Description (Engagement manager)
- Cloud Growth Planning, Objective Setting, and Sustainability Measures.

Brand Success Stories

Majority of stakeholders agreed that brand success stories can change decision-maker's perceptions and encourage them to accelerate the decision to transform to cloud computing technology. MS3 explained,

"When a client decision-maker check with another client about the value of an implemented solution, such a message can accelerate the decisions toward cloud

computing technology transformations, especially if they [the two clients] are from the same business industry (e.g. banking, aviation, the public sector, etc.). We should allocate an owner who is responsible for the branding of service line success stories via a plan."

Reflective note, during the analysis, the brand of success stories can be simplified by considering the need of client decision-makers to obtain an information in a short time. If we are talking about a storytelling video, it should be 30 seconds, not 5 minutes. Also, it can include the utilized use cases, and impacting value in terms of cost, time, and revenue as part of the message.

As an analysis summary, the emergent theme is: Brand Success Stories, supported by the following generated codes:

- Assign a Brand Owner
- Define Client Advocates
- Record Videos with Clients
- Create Branding Plan, Execute Branding Plan
- Add Value to Use Cases
- Use Remote Professionals to Record Videos.

Priority of Implementation for Cloud Sales Booking & Consumption Growth

In Cycle 2, iteration 2, participants were asked about the priority of implementation. The majority agreed that sales coverage and value-based solution selling is the top priority. Also, they agreed that the role of the engagement manager should be a Priority 1 action, while branding success stories can be a Priority 2 action with a 6-month start plan after commencing with the implementation of Priority 1 actions. MS9 illustrated this by saying,

"For sure sales coverage and value-based solution selling should by the highest priorities. Without accelerating the sales impact, revenue target achievement will be a challenge. I also believe the transformation of the project manager role into an engagement manager role should be a Priority 1; the reason for this is that people take time to change, so we have to start now to see a tangible outcome after six to nine months. Brand success stories can be a Priority 2 to start 6 months after starting priority actions, although it is an important tool with the salespersons, but it is better to focus on the most impactful actions first."

In conclusion to section 5.2.2, cloud sales booking and consumption have three actions, these are (1) sales coverage and selling of value-based solutions, (2) promotion of engagement manager role in cloud expansion and Techcelerate program, and (3) brand success stories. Minority themes were captured but did not obtain the consensus of the stakeholders, such as the services-sales approach should be focusing on selling limited services to understand the client needs since do a gradual approach. Stakeholders view that every transaction has its own nature, and such an approach cannot be generalized. Also, limiting services-sales roles only to salespeople was not encouraged, as project managers proved that they can impact booking performance indicator via services upselling.

5.2.3 Actions for Project Delivery Excellence

The majority of participants suggested two main actions to achieve project delivery excellence. These are related to, first, the execution quality and efficiency of project delivery and, second, the measurement of client loyalty and employee cloud impact.

Set Delivery Execution Excellence Measures for Quality & Efficiency

The majority of participants agreed on the criticality of having defined excellence measures to ensure the quality and efficiency of project delivery.

MS6 expressed that by saying,

"Employees who work on a project delivery are the ones who build the client perception and loyalty. The employee value shows the impact and business relationship continuity with the client. Hence, I suggest focusing on execution quality and efficiency. For instance, I talk about the quality of the work deliverables that the client receives. I talk about the accuracy of the employee in forecasting the expected revenue and costs that the project work activates. I mean effective executive communication management with the client sponsors and decision-makers, and I mean proper escalation management. Successful project teams are

those who are able to communicate properly, set expectations as early as possible, and manage risks and issues properly."

Reflexive note, during analysis, execution quality is about managing financial risks on time and effectively. For instance, if a customer is delayed in payment, then there is a money collection risk. If a project is delayed, then there is a forecasted revenue risk. Delivery excellence is about how visible all these risks are to the project team and the ability to manage them in a way that does not impact the service line performance indicators. The earlier the project team raises these risks, the better the ability of the service line to deal with them and avoid financial risks to the project and service line performance indicators.

As an analysis summary, the emergent theme is: Set Delivery Execution Excellence Measures for Quality & Efficiency, supported by the following generated codes:

- Quality of Deliverables
- Effective Communications
- Setting Expectations Properly
- Manage Risks Issues Properly
- Accuracy of Forecasting
- Managing Financial Risks

Measure Client Loyalty (NPS) and Employee Cloud Impact

The majority of participants agreed that measuring client loyalty via the net promoter score (NPS) indicates delivery excellence. MS6 explained,

"For me, client judgement is the tool that can tell me if we have delivery excellence within the service line or not. If a client provides a high NPS, this is an indication of success. If the NPS is average or low, then there is much room for improvement."

A high NPS score means the client can give a reference letter to other customers to recommend the service line as a qualified service provider. It can also mean that client can speak positively about the service line's work quality. However, higher NPS scores depend on the employee's work quality and the impact that he can demonstrate to the client.

MS2 explained the employee's cloud impact as follows:

"Apart from the employee's quality of work deliverables, it is expected that the employee capitalizes on the company initiatives that can show value to the client, for example the Techcelerate and Imagine programs which can help the client to accelerate use of the cloud valued use cases and imagine future solutions/innovations that can be implemented."

Reflexive note, during analysis, if cloud consumption is growing, it indicates that the client trusts the cloud use cases and solutions implemented; it is a sign of the employee's impact working directly with the customer.

As an analysis summary, the emergent theme is: Measure Client Loyalty (NPS) and Employee Cloud Impact, supported by the following generated codes:

- Employee Impact
- NPS
- Company initiatives
- Measuring Cloud Consumption Growth
- Measure NPS at Project Phase Exit Review
- Measure Cloud Consumption Trend
- Execute Company Initiatives

Priority of Implementation for Delivery Excellence

The majority of participants agreed that execution quality and efficiency related to project delivery should be a Priority 1 during implementation, while client loyalty (NPS) and employee cloud impact can be a Priority 2, but with only a time gap of three months. MS10 explained,

"Both actions are important to implement, but we have to start by putting the execution quality measures first; then we can capture the client feedback. I believe the time gap between starting both actions should not exceed three months, as getting client feedback can give a chance to highlight existing perceptions, which

can help during the planning of setting the quality measures of the service line employees' work."

In conclusion to section 5.2.3, two recommended actions to achieve project delivery excellence. These are: (1) execution quality and efficiency of project delivery and, (2) measurement of client loyalty and employee cloud impact. Minority theme was captured but did not obtain the consensus of the stakeholders, such as one delivery role person can execute many roles in the project, for instance, executing the roles of project management, architect, and testing functions by the same person. That was proven to impact quality outcomes, especially in large size projects.

5.2.4 Actions for Project Delivery Cost Optimization and Sustainability

The majority of participants suggested two actions for project delivery cost optimization and sustainability: maximizing dependency on remote centres and implementing project sustainability measures.

Maximize Dependency on Remote Centres (Offshore and Nearshore)

The majority of stakeholders emphasized the importance of utilizing the work with remote centres, however, that has some challenges. MS6 described these challenges and offered suggestions for the service line managers:

"Everyone can agree on the importance of the remote centres to reduce project delivery costs, whether working with the offshore centre in India that is used to supply the technical capabilities or the nearshore centre in Egypt that is used to

supply capabilities with Arabic language skills. Yes, it is true to say that the remote hubs are less costly compared to employees based in Saudi Arabia or the UAE. But the question here is, can we receive the same competency level and expected work quality? Maximizing dependency on the remote hubs requires setting success measures to ensure that it is a highly competent hub..."

Reflexive note, during analysis, if a client is dissatisfied working with the remote hubs, it is a negative sign. Clients can accept increasing the remote delivery percentage to 70% or 80%, or even higher, as long as the quality of deliverables is not affected, and the time of project delivery is not affected. Remote hubs have to be agile in their response; for instance, if they support a client in a different time zone, remote hubs have to accept this and support the client's response in his/her working time zone.

Majority of participants agreed on the relationship of sustainability requirements and the importance of remote work. MS1 addressed reductions in project delivery costs from a sustainability angle by saying,

"The service line should encourage the clients toward remote delivery via sustainability benefits. Remote delivery does not require air travel as well as local transportation. Hence, it eliminates carbon dioxide emissions."

Reflexive note, during analysis, while sustainability can encourage clients to remote work, the project manager should ensure the quality of the remote work;

hence, it is important to evaluate the client feedback, and if a low NPS value is given, then such feedback has to be evaluated and addressed.

As an analysis summary, the emergent theme is: Maximize Dependency on Remote Centres, supported by the following generated codes:

- Remote Hub Criteria of Success
- Employee Impact
- Measure NPS
- Remote Hubs Working Agility
- Evaluate NPS
- Implement Sustainability Measures

Implement Project Sustainability Measures

The majority of stakeholders agreed on the importance to set sustainability measures for the projects under delivery. MS2 described the possible sustainability measures that can be implemented by saying,

"Firstly, I suggest starting by nominating a point of contact in each cloud project that owns the sustainability measures' execution, monitoring, and evaluation. Secondly, we can aim to reduce air travel and local transportation by depending on the remote centres to deliver the project activities. Thirdly, we can issue a sustainability report at the end of each project phase that shows the actuals

versus the planned sustainability project measures."

Reflexive note, during analysis, the service line can encourage the clients about the idea of green projects. Prior to the COVID-19 pandemic, the onsite percentage versus remote delivery used to be 30–40% on average onsite as per the company project management methodology. The idea of green projects that are 100% remote, or at least 10–20% onsite can be promoted. The sustainability report can show how much carbon dioxide emissions have been eliminated due to implementing sustainability measures. This can encourage the customers to implement these sustainability measures if the facts are clear. The company can reward clients who successfully planned and delivered a 100% remote project with the service line.

As an analysis summary, the emergent theme is: Implement Project Sustainability Measures, supported by the following generated codes:

- Project sustainability point of contact
- Reduction of Air Travel
- Reduction of Local Transportation
- Measure Percentage of Onsite Vs Remote Delivery
- Project Sustainability Report
- Promote Green Projects at the end of the project.

Priority of Implementation

Most participants agreed that maximizing the dependency on remote centres should be a Priority 1 goal, while implementing sustainability measures can be a secondary priority, with a three-month gap between the two. MS10 elaborated that by saying,

"I fully recommend optimizing project delivery costs by maximizing the engagement of the remote hubs during project delivery; however, that should be associated with success criteria to be set and supported by the remote centre management teams. Sustainability measures are also important; they can convince the client to depend more on the remote hubs in the project delivery, but they can be implemented three months after establishing the right measures to maximize the use of the remote centres."

In conclusion to section 5.2.4, two recommended actions for project delivery cost optimization and sustainability, are (1) maximizing dependency on remote centres and (2) implementing project sustainability measures. A Minority theme was captured but did not obtain the consensus of the stakeholders, such as remote centres are not effective from a quality outcomes perspective, while stakeholders agree that some incidents could trigger those perspectives, however, that suggests areas of improvement rather than deciding those remote hubs are not relevant for the business considerations.

In summary, section 5.2 showed 11 recommended actions to implement as an outcome of cycle 2.

5.3 Cycle 2 Discussion of Outcomes

This section explains the cycle 2 outcome framework showing the relationship between the focus areas, recommendation actions and sub-actions, priority of implementation, and emergent themes/ generated codes in relation to the business pillars; which are employees, customers, business processes and sustainability. This section is organized into two parts, (1) Cycle 2 outcome framework, and (2) Sub-Actions per each recommended action.

5.3.1 Cycle 2 Outcome Framework

Table 5.1 lists the outcome framework in relation to the emergent themes (recommended actions) per the four defined business pillars. Such outcome was a result of the analysis of two iterations within cycle 2, mainly to obtain the consent of the stakeholders on the emergent themes and generated codes, as well as to define the priority of implementation. The table also lists the generated codes under each business pillar (Employees, Customers, Business Processes, and Sustainability). These generated codes illustrate the key words or perspectives mentioned by stakeholders in relation to the recommended actions.

Table 5.1: Cycle 2 Findings - Stating Operational Efficiency Recommended Future Actions (Defined Emergent Themes) Mapped with the Business Pillars, and Stating Generated Codes Per Each Business Pillar

	Action	Priority	KPIs	Employees	Customers	Business Processes	Sustainability
Foundations for Success (Working Culture)	1 – Promote cohesive culture and positivity	P1	All	• Establish Trust • Effective Conflict Management • Ensure Commitment • Ensure Accountability • Achieve Business Results • Promote Positivity • Address Negativity	Client NPS	• Communication Management (Strategy, One to One Reviews, Recognitions, Awarding) • Performance Reviews	--
	2 – Develop talent attraction tools	P1	All	• Digital Disruptors • Working Time Place Flexibility • Space For Innovation • Expressing Thoughts Ideas • Client Impact • Recognitions • Funding LifeLong Learning • Fair Compensation	Client NPS	• Hiring Process (Humble, Hungry for business results, Smart, Criteria of a talent) • Execute Talent Attracts • Communication Management (1-1 meetings, recognitions) • Payroll Assessment Vs Market Fair Compensation	Flexible Working Locations

				• Employee Brand			
	3 – Design clear objectives and career aspirations	P2	All	• Smart Objectives • Diversified Objectives • Career Aspirations		Communication Management (Objectives Setting, Career Aspiration)	
	4 – Ensure execution excellence/quality	P2	All	• Forecasting Accuracy • Raising Risks Mitigations on Time • Quality of Work Deliverables • Business in Control Measures	Quality of Work Deliverables	Performance Review Process	Employee Execution Sustainability Measures (Reduction of Paperwork, Online Trainings, Avoiding Large Email Attachments, Using Digital Shared Folders)
Growth of Cloud Booking & Consumption	1 – Promoting sales coverage & value-based solution selling	P1	Booking, Cloud Consumption	• Employee Impact • Employee Brand (Reusable assets, Experiences, Value-based selling) • New Innovation Promotion (Upload new valued use cases)	Sales Territories Design (Focus Territories, Focus Project Types, Focus Services, Focus Solutions) Value Based Service Selling (Cost Reduction, Revenue and Profit Increase, Saving Time)	Territory Planning Territory Assignment Use Case Value Create Innovation Use Cases	Maximise Remote Sales Support (proposal creation, solution designs, sales collaterals)
	2 – Promoting engagement manager role in cloud expansion &	P1	Booking, Revenue, Cloud Consumption, Margin,	Transform Project Managers To Engagement Managers	C-Suite Business Trusted Relationship Measure Client Loyalty (NPS)	Job Role Description (Engagement Manager) Cloud Growth Planning Objective Setting	Sustainability Measures (to ensure sustainability requirements are implemented)

	Techcelerate program		Utilization		Create & Execute Cloud Consumption Growth Plan Techcelerate Execution Owner		
	3 – Promoting Brand success stories	P2	Booking, Cloud Consumption	Assign a Brand Success Story Owner	Define Advocates from Clients Record Videos with Client	Create Brand Plan Execute Brand Plan Add Value to Use Cases	Use Remote Professionals to Record Videos
Delivery Excellence	1 – Ensuring Delivery Execution Excellence Measures for Quality & Efficiency	P1	Revenue, Cloud Consumption, Costs, Margin, Utilization	Employee Impact	Quality of Deliverables Effective Communications Setting Expectations Properly Manage Risks and Issues Properly,	Accuracy of Forecasting Managing Project Financial Risks Ensure Accuracy of Execution	Ensure Sustainability Plan and Execution are in place
	2 – Ensuring Client loyalty (via NPS) & employee cloud impact	P2	Booking, Revenue, Cloud Consumption, Costs, Margin, Utilization,	Employee Impact	NPS Company initiatives Measuring Cloud Consumption Growth	Measure NPS at Project Phase Exit Review Measure Cloud Consumption Trend Execute Company Initiatives	

Cost Optimization & Sustainability	1 – Maximize dependency on remote centres	P1	Costs, Margin, Average Daily Rate	Employee Impact	Measure NPS Encourage Remote Center Work Due to Sustainability	Remote Hub Criteria of Success Ensure Remote Hubs Working Agility Evaluate NPS	Implement Sustainability Measures
	2 – Implement project sustainability measures	P2	Costs, Margin, Average Daily Rate	Owner (Project manager, Engagement manager)	Project sustainability point of contact Project Sustainability Report Promote Green Projects [Zero Carbon] at the end of the project	Measure Percentage of Onsite Vs Remote Delivery	Reduction of Air Travel Reduction of Local Transportation

While the KPIs [performance indicators] are affected by the recommended actions, the key focus, according to the participants, was on most impactful indicators such as bookings, revenue, cloud consumption, and costs, as illustrated by MS11:

"Margin is just an indicative check point to understand how revenues versus costs are; also, average daily rates are indicative just to understand what rate was used at the sales process to compare it to the allocated resource in the delivery cycle to ensure that delivery is planned as per the project budget set during the sales cycle."

5.3.2 Sub-Actions Per Recommended Action

Cycle 2, Iteration 2 was used to understand the priority of implementation (listed in Table 5.1), while Iteration 3 was used to understand the sub-actions required to implement each recommended action. These sub-actions were the input for Cycle 3, to agree with the participants on how to implement them and what expected challenges that require mitigation. Table 5.2 lists the focus areas, recommended actions, and sub-actions. Member checking approach was used during the interview and analysis stages to validate proposed ideas between stakeholders to ensure consent and alignment.

Table 5.2: Cycle 2 Findings - Operational Efficiency Detailed Sub-Actions Per Each Recommended Future Action Framework

Focus Areas	Recommended Actions	Detailed Sub-Actions
Foundations for Success (Working Culture)	1 – Promote cohesiveness and positivity	1 – Recognize and reward cohesiveness/ positivity using email and company rewarding tools. 2 – Implement "Team Loyalty Survey" via the net promoter score (NPS; team loyalty to the service line) – detect positivity/ negativity of the team. 3 – Execute communication management action, including • Strategy • One-on-one reviews (ideas, thoughts, negative feelings). 4 – Conduct performance reviews. 5 – Execute project phase exit reviews: measure client NPS (indicates employee impact on the project).
	2 - Develop talent attraction tools	1 – Add criteria for talent to hire in the hiring process. 2 – Create talent attraction tools process. 3 – Recognize impactful work by employees, such as client recognition of employee value. 4 – Scan/evaluate existing employees against the defined talent criteria. 5 – Conduct project phase exit reviews: measure client NPS. 6 – Plan one-on-one meetings with employees and managers. 7 – Assess payroll deviations from job grade salary ranges for evaluation for further salary adjustment.
	3 – Design clear objectives, and plan career aspirations	1 – Set employee objectives. 2 – Plan career aspirations with the employee and set them in the system (employee internal portal for human resource management-related aspects).
	4 – Ensure execution excellence	1 – Set execution quality and excellence measures. 2 – Use performance review process to evaluate the employee's execution quality and excellence.
Growth of Cloud Booking & Consumption	1 – Promoting solution selling	1 – Design efficient sales territories, that are function of the project types that of high probability to win. 2 – Assign sales territories to the suitable salesperson.

		3 – Re-position service line use cases to the value that matters to C-suite decision-makers. 4 – Promote new valued innovation use cases. 6 – Maximize remote sales support to support sustainability. 7 – Position employee value to clients by promoting the employee’s experience. 8- Define areas for re-planning and improvements.
	2 – Promoting engagement manager role in cloud expansion & Techcelerate program	1 – Define job description of an engagement manager. 2 – Set work objectives and role success criteria in terms of business impact of the various performance indicators and agree on them with the engagement manager. 3 – Track progress via regular performance review meetings.
	3 – Promoting Brand success stories	1 – Define a branding owner in the service line. 2 – Create list of potential success stories and client advocates. 3 – Extend use cases’ value to include the impact on cost, time, and revenues. 4 – Create a success story marketing plan with tools and resources required. 5 – Execute the business line brand plan.
Delivery Excellence	1 – Ensuring Delivery Execution Excellence Measures for Quality & Efficiency	1 – Define execution excellence measures 2- Assess employees’ work quality based on feedback from clients. 3 – List the project managers who have a high level of quality in leading projects, and others who might need support and guidance. 4 – Reward successful quality and efficient cases. 5 – Assign a mentor to support employees who need help and guidance to improve their work quality. 6 – Provide training for new hires on the basics and foundation of execution quality and efficiency.
	2 – Ensuring Client loyalty (NPS) & employee cloud impact	1 – Add “Measure NPS” to the Project Management Methodology, and execute it during every project phase’s exit reviews. 2 – Add “Measure Cloud Consumption” every month as part of the project manager’s activities, and review the consumption trend analysis over time.

		3 – Conduct service line management team meetings with clients of average or low NPS to understand the client's view and the potential opportunities to improve trust in the business relationship. 4 – Establish measures to strengthen the business relationship with clients who give high NPS values.
Cost Optimization & Sustainability	1 – Maximize dependency on remote centres	1 – Set success criteria for working with the remote hubs, and agree on evaluation periodicity. 2 – Set expectations with the remote centres' leadership teams about client expectations in the geographical region of the Middle East (Gulf States and Saudi Arabic). 3 – Measure the NPS with clients, and assess their perception of the quality of the remote centre team's work. 4 – Run client feedback evaluation meetings between the service line and remote centre management to praise high-quality work, and take action to improve low-quality work. 5 – Use sustainability measures to promote remote work to clients during the services sales process and project planning activities with the client.
	2 – Implement project sustainability measures	1 – Assign a point of contract in each cloud project to monitor and evaluate the execution of a project's sustainability measures. 2 – Prepare a sustainability report template that shows the planned versus actual sustainability measures and that reflects information on carbon dioxide eliminations and the percentage of onsite versus remote deliveries. 3 – Design a recognition award to be issued for green projects that succeed in implementing 100%, 90%, or 80% remote delivery.

5.4 Chapter 5 Summary

The recommended actions resulting from Cycle 2 are grouped into four categories: foundations for success (working culture), growth of cloud bookings and consumption, project delivery excellence, and finally project delivery cost optimization and sustainability. Table 5.3 summarizes the 11 key themes (recommended actions) per focus areas. Four actions related to the foundations for success are suggested: promoting a cohesive culture and positivity, developing talent attraction tools, designing clear objectives and planning career aspirations, and ensuring execution excellence. Here, execution excellence is not limited to the project's delivery activities but covers the service line operational activities (including non-project-related activities).

Table 5.3: Cycle 2 Findings – Operational Efficiency Recommended Future Actions Framework

Cycle 2 Outcome – Key Recommended Actions				
Focus Area	**Action 1**	**Action 2**	**Action 3**	**Action 4**
Foundations for Success (Working Culture)	Promote Cohesive Culture & Positivity	Develop Talent Attractions	Design Clear Objectives, and Plan Career Aspirations	Ensure Execution Excellence & Quality
Growth of Cloud Services-Sales Bookings & Consumption	Maintain Sales Coverage & Promote Value-Based Solution Setting	Promote Engagement Manager Role in Cloud Expansion & Techcelerate Program	Brand Success Stories	
Project Delivery Excellence	Ensure Execution Quality & Efficiency Related to Project Delivery	Measure Client Loyalty (via NPS) & Employee Cloud Impact		

Project Delivery Cost Optimization & Sustainability	Maximize Dependency on Remote Centers (Offshore & Nearshore)	Implement Project Sustainability Measures		

For the growth of cloud services-sales bookings and consumption, the results emphasised on focusing on the design effectiveness of the sales territories (grouping of clients) and ensuring the right sales coverage (salespeople ownership). Moreover, in those sales territories, the focus can be on selling solutions with impactful value (value-based solution selling). While designing the territories, the participants suggested focusing on clients who prefer contracting the service line as a trusted service provider; clients with projects that are at high risk of failure by the other service providers (external to the company), to protect such clients from taking their business to the competition; and clients with projects that require niche skills and specialization from the company service line.

The findings highlight the importance of transforming project managers into client engagement managers, with sales objectives to position the cloud value to the clients and capitalize on the Techcelerate program (company-defined program to promote cloud solutions) that is used to accelerate cloud consumption with clients by positioning the reusable assets and use cases. Engagement managers can play a vital role in developing C-suite business relationships such as trusted business adviser relationships. Finally, the results demonstrate the importance of focusing on marketing the success stories with clients, including social media marketing and video recording with C-suite stakeholders.

With regard to project delivery excellence, the results indicate the importance of focusing on the execution quality of the project delivery activities and efficiency in terms of time and business result outcomes. Such project delivery excellence includes effective communication with clients to manage expectations and escalations effectively. Furthermore, the results highlight the importance of the accuracy of financial forecasting and managing financial risks effectively and timeously. Finally, the results show the importance of growing cloud solutions on the client side by capitalizing on the company programs and initiatives that can support this growth.

In terms of reducing project delivery costs, the results show the importance of maximizing the usage of remote centres in delivering projects, but with set success criteria to ensure the quality of the project deliverables and to meet the client expectations. The results also highlight the importance of establishing sustainability measures (e.g. delivering green projects with zero carbon emission) within the project delivery plans and encouraging green projects that eliminate carbon dioxide emissions due to air travel and transportation.

The results of cycle 2 were surprising, noting that new actions were suggested that did not exist in the current business framework, such as the term cohesiveness, talent attractions tools, and NPS impact. Cycle 2 data collection was complex, especially the moments of collecting data and validating back with the various participants to build agreements about the outcomes.

The next chapter illustrates Cycle 3 outcomes in terms of how to implement these actions and what the implementation challenges and mitigations are, including the timelines and ownership of the actions.

6 Chapter 6: Cycle 3 – Taking Actions into Implementation & Mitigating Challenges

6.1 Introduction

This chapter presents the third cycle of action research. The aim of this cycle was to determine and understand how to implement the recommended actions, it answers the third research question on how to take the actions into implementation and what are the anticipated challenges and mitigations. The inputs for this cycle were the recommended actions and sub-actions from cycle 2. In this cycle, the discussion with 10 participants focused on how to implement the actions in terms of processes that require business changes, the owners who could be the recommended action implementation owners, the timelines related, and the expected challenges and how to mitigate them. The owners were determined according to job roles in the company that had the authority or position-power to implement the changes. Table 5.2 is crucial to note as it lists all the sub-actions required for execution.

Cycle 3 was conducted in three iterations. The first iteration revealed the initial perspectives of the stakeholders on how to take the actions into implementation, defining the business processes to be impacted, change owner and timelines. The second iteration was about sharing the various perspectives and building a consensus upon the stakeholders, that resulted into having the majority of the opinions. The third iteration was about identifying the critical challenge(s) that can impact the implementation of the action. Interview protocol of cycle 3 is detailed in Appendix B.

The implementation cost requirements were not discussed with the stakeholders, as the primary objective was to develop a comprehensive framework for the service line managers and employees to improve and achieve operational efficiency. The research aimed to introduce a transformative approach that would drive positive impact in how individuals within the organization can operate. By emphasizing a change in mindset and promoting a collective understanding of the desired outcomes, the research sought to empower employees to adopt new ways of thinking and behaving without placing specific financial constraints or requirements on the process. Financial requirements are not presenting any impact on the implementation of actions, since the framework explains the changes in the business processes, that managers and employees need to take into their business as usual duties.

The remainder of this chapter is split into six sections. The first four sections (Sections 6.2–6.5) are related to the focus categories from cycle 2, namely the foundations for success (6.2), the growth of cloud services-sales booking & cloud consumption (6.3), delivery excellence (6.4), and project delivery cost optimization & sustainability (6.5). Then, Section 6.6 presents a framework of cycle 3's outcomes. Lastly, Section 6.7 provides a summary of the chapter.

6.2 *Cycle 3 Part I: Foundations for Success*

In the category of foundations for success, there were four actions to implement, namely (1) promoting a cohesive culture and positivity, (2) developing talent attraction tools, (3) designing clear objectives and planning career aspirations, and (4) ensuring execution excellence/quality.

6.2.1 Promoting a Cohesive Culture and Positivity

The first action to implement was promoting a cohesive culture & positivity, for which the participants suggested the sub-actions in Table 5.2. Most participants agreed that the action of promoting a cohesive culture and positivity requires changes in HR processes and the project management methodology.

MS3 illustrated this by stating the following:

"Such action requires modification in the recognition and awarding process, project phase exit evaluation, communication plans, employee performance evaluation, and employee impact rating. The owners who should own the execution of the action are the service line manager, the human resources service line business partners, and the head of project managers."

MS1 spoke about the periodicity for executing the suggested sub-actions as follows:

"My suggestion is that any strategy communication and updates as well as the_recognition and awarding of employees should happen in the quarterly all-

hands meeting, while the project phase exit evaluation depends on the time plan of the project which varies from one project to another. The one-to-one meetings with individual employees can be planned every 3 months or 6 months. For employee performance evaluation, employee loyalty survey and employee impact rating that should happen every 6 months…"

While the suggested actions are within the control of the service line and could be straightforward to implement, the success indications of this action could be subjective. The service line can implement actions to promote cohesiveness and positivity, but measuring their success could be a challenge. Collecting higher NPS values from clients and employees could provide an indication of the success of such an action, but it would not provide a complete assurance that no hidden negativity exists in the team.

MS7 spoke about the difficulty of capturing negativity within the team and the potential mitigation plan as follows:

"Negativity within certain individuals is difficult to spot and capture. It can be normal to have someone not satisfied and he does not express feelings, and at the same time, he can inject negative feelings into the service line team during the socialization activities between the team members. It is difficult to spot negative feelings unless encouraging people to speak. People who are negative, are dangerous to the team, and such behaviour if detected and not resolved should be reviewed with the human resources department. The human resources department can implement a mitigation plan, and if the behaviour is not changed then disciplinary action has to be taken according to the company policy."

In summary, promoting a cohesive culture & positivity requires changes in the human capital management and project management processes. Such actions are within the control of the service line leader. The challenge is how to capture hidden negative behaviour, which can be mitigated by HR procedures.

6.2.2 Developing Talent Attraction Tools

The second action to implement is developing talent attraction tools, for which the participants suggested the sub-actions in Table 5.2. The majority of the participants agreed that this action requires changes in HR processes, communication management plans, and project management methodology.

MS4 illustrated this as follows:

> *"In order to retain talent, first we need to understand the criteria of defining talent and then scan the existing employees against these criteria. The employee rating can be used to reflect a person as a talent or not. A talent is a person who is knowledgeable, has effective communication and achieves impactful business outcomes. Also, he should have innovation capabilities. Such actions require changes in the employee rating process, and also to the talent criteria as part of the employee hiring process. Also, to add talent recognition as part of the employee recognition process. For instance, the net promoter score should be measured as part of the project exit phase review and added as part of the employee evaluation. The one-to-one reviews between a talent and his direct manager or service line management are also to be added as part of the communication management process. Talent rating should be reflected in the annual performance evaluation."*

Furthermore, MS9 suggested adding an employee loss risk assessment process:

"At the moment, we do not have an employee loss risk assessment, I noticed the service line reacts reactively to talents who get offers from the competition trying to retain them, and mostly the time is not enough to retain talents as they have to accept or reject offers in a limited timeframe."

The suggested processes are within the control of the business owners; however, the service line could lose strong talents if the competition's offers are highly attractive. MS9 explained this as follows:

"It is normal in the business to lose good talents, we do not like that, but sometimes it is out of what service line can offer. We see sometimes that talent is very well paid, and continuously recognized, but he leaves cause the offer from competition is very attractive. Service line leaders have to be ready with their alternative plan to deal with such business risks like hiring new replacing talents."

In summary, to develop talent attraction tools, the processes to change are mainly related to HR, communication, and project management. The challenge lies in how to retain talent if they receive highly attractive offers. The service line must be ready to accept such a risk and have alternative plans, such as hiring new talent.

6.2.3 Designing Clear Objectives and Planning Career Aspirations

The third action to implement is designing clear objectives and planning career aspirations, for which the participants suggested the sub-actions in Table 5.2. Most of the participants agreed that this action requires changes in appraisal management and career aspiration plans. MS5 illustrated this by stating the following:

"In regard to clear objectives and career aspirations, objectives have to be SMART [Specific, Measurable, Achievable, Relevant, Time-bound], and managers have to give the space for the employee to express aspirations. Managers have to ensure they establish a cohesive and trusting culture between the employees and that the environment supports fair evaluations of employee performance. Service line leaders and mid-mangers have a key role in the execution ownership and success of this action."

MS4 spoke about the periodicity for executing the suggested sub-actions as follows:

"Objectives of the new year have to be set and agreed upon within the first month of the fiscal year, and to have a performance review with regard to set objectives and career plans every 6 months for potential mitigation to execution challenges."

While the suggested actions are within the control of the service line, the challenge lies in ensuring that a cohesive culture is in place that establishes employees' trust in the fact that their efforts and achievements will be recognized and that their aspirations can be fulfilled. Employees must feel the support of their managers against the risks that might affect their ability to achieve set goals.

MS1 spoke about the difficulty of setting clear objectives and planning career aspirations as follows:

"Establish the trust between the manager and the employee is the key to success here. Upon having the trust, the employee can share with the manager the challenges, while ensuring that he is getting the required support toward achieving his career goals and aspirations."

In summary, to design clear objectives and plan career aspirations, the processes to change are mainly related to appraisal management and career aspiration plans. The challenge is to establish a culture of trust between the manager and employees, and also to ensure set objectives and career aspirations that are SMART (Specific, Measurable, Achievable, Relevant, and Time-bound).

6.2.4 Ensuring Execution Excellence/Quality

The fourth action to implement is ensuring execution excellence and quality, for which the participants suggested the sub-actions in Table 5.2. The majority of the participants agreed that this action requires changes in the performance evaluation process, the client NPS collection process, and the recognition processes of clients, other business lines, and company colleagues. MS7 illustrated this by stating the following:

“Unless execution excellence is maintained and set as part of the people objectives, it can negatively impact the operational efficiency performance indicators. If execution performance cannot be measured, then there is no potential room for improvement. Execution excellence is about doing the action the right way. The service line leaders have to set the execution excellence measures and quality as part of the people objective, collect the client NPS, promote the good behaviour and recognize it. Recognition is encouraging other colleagues to replicate and show good behaviour.”

MS5 spoke about the periodicity for executing the suggested sub-actions as follows:

“Execution excellence evaluation should be part of the regular performance evaluation every 6 months. In such evaluation, the manager should give the employee feedback on what is going well, and what are the areas of improvement. Also, the employee can ask for coaching to support him/her to succeed.”

The suggested actions, processes, and owners are within the control of the service line; however, such actions might entail challenges related to employee upskilling and mastery of the internal company processes. Furthermore, employees’ work–life balance could suffer, which would affect the execution’s focus and hence its excellence; thus, the manager and employees must discuss such challenges and agree on the appropriate mitigation plan.

MS2 spoke about such challenges and their mitigation as follows:

"The work–life balance is a major challenge that can affect execution excellence, as it distracts the employee focus. Work–life balance is one of the potential areas of improvement today that require managers to re-organize the workload. Mastering the internal processes and finalizing the upskilling on time is important and have to be part of the regular performance evaluation."

In summary, to ensure execution excellence and quality, upskilling training plans can be accelerated, and internal company operational processes can be mastered. The challenge is to ensure that employees maintain a work–life balance.

In conclusion to section 6.2, the four actions and sub-actions of foundations for success were explored with identified implementation steps, timelines lines and mitigations of challenges expected. There were minority of opinions that were not considered, such as, facing a penalty on the employee in case if not following the planned procedures, that was rejected by most of the stakeholders who preferred to foster a culture of trust and open discussions with the employees.

6.3 Cycle 3 Part II: Growth of Cloud Services-Sales Booking and Cloud Consumptions

The growth of cloud services-sales booking and cloud consumptions encompassed the following three actions to be implemented: (1) Promoting sales coverage and value-based solution selling, (2) Promoting the engagement manager role in cloud expansion and the Techcelerate program, and (3) Promoting brand success stories.

6.3.1 Promoting Sales Coverage & Value-Based Solution Selling

The first action to implement was sales coverage and value-based solution selling, for which the participants suggested the sub-actions in Table 5.2. The majority of participants agreed that this action requires changes in the sales territory design process, sales territory employee mapping process, business value and innovation use case process, and client positioning value process. MS10 illustrated this as follows:

> *"Sales coverage and promoting the value-based solutions are key toward the cloud services-sales growth. The number of salespeople is limited; hence, it requires efficient mapping to sales territories and customer accounts to the employees. That requires to look into the territories design, territory mapping process and ensure the effective value-based solutions are positioned to the right customer."*
>
> MS8 spoke about the periodicity for executing the suggested sub-actions as follows:
>
> *"Sales territories and mapping are done at the beginning of every fiscal year; however, a review can be done every 6 months for potential modifications. The promotion of new value-based use cases is a continuous regular process that can executed every 3 months."*

While the suggested actions, processes, and owners are within the control of the service line, the execution challenge lies in the number of capable people who can execute sales activities as well as the limits of growth that the existing team can own.

MS10 spoke about the challenges and their mitigation as follows:

"Sales activities have to be extended to project managers and architects, in which salespeople focus on acquiring new clients, while project managers/architects focus on upselling. It is important also to assess the limits that the business line can achieve for growth, else the service line can collapse fast."

In summary, to promote sales coverage & value-based solution selling, changes are required in the sales territory process, employee mapping process, business value and innovation use case process, and client positioning value process. The challenges are related to the number of employees who can execute sales activities as well as to understanding the growth limits that the team can carry moving forward.

6.3.2 Promoting the Engagement Manager Role in Cloud Expansion and the Techcelerate Program

The second action to implement was promoting the engagement manager role in cloud expansion and the Techcelerate program, for which the participants suggested the sub-actions in Table 5.2. The majority of participants agreed that this action requires changes in the employee job description process, employee appraisal plan, and employee performance appraisal. MS2 illustrated this by stating:

"The transformation of the project manager role into an engagement manager is critical toward the business success. That requires changes to the employee job description process, set the right targets and objectives, and perform regular feedback for performance evaluation."

MS1 spoke about the periodicity for executing the suggested sub-actions as follows:

"Engagement managers require support and guidance in their role transformation, my view is that this requires evaluation every 3 months, then it can be set every 6 months at the moment the employee can perform independently."

While the suggested actions, processes, and owners are within the control of the service line, the challenges are related to how to balance the engagement manager's time and how to create an impact through the new role.

MS6 spoke about the difficulty of capturing negativity within the team and what the appropriate mitigation plan could be as follows:

"Service line managers have to support the engagement managers in the beginning and provide them the needful support to succeed. With the right guidance and coaching, engagement managers can overcome role transformation

challenges. Experienced leaders in the service line can provide the required coaching on how to create impactful outcomes with the client's key influencers.

In summary, to promote the engagement manager role in cloud expansion and the Techcelerate program, it requires changes in the employee job description process, employee appraisal plan, and employee performance appraisal. The challenges are related to the initial role transformation success in terms of managing time effectively and creating an impact with the client C-suite.

6.3.3 Promoting Brand Success Stories

The third action to implement was promoting brand success stories, for which the participants suggested the sub-actions in Table 5.2. Most participants agreed that this action requires changes in the processes of promoting success stories and social media impact. MS3 illustrated this by stating the following:

> *"Promoting the good moments in the service line is important to let other lines of businesses be aware of the success stories delivered. These good moments are either a new project or a completion of a project. It could also be an innovation contribution. Hence, the key processes to be changed here are the promotion of success stories, and the social media communication impact. The service line leader, along with the sales leader and delivery managers, have to agree on an*

execution plan and assign an owner to take care of publishing such success stories."

MS4 spoke about the periodicity for executing the suggested sub-actions as follows:

"The brand success story owner has to prepare proactively the brand plan every 3 months. The plan should include all new project wins, all completed projects, and any innovation cases that can add value to the customer and other lines of business."

While the suggested actions, processes, and owners are within the control of the service line, the challenge is how to ensure that success stories are submitted on time and to the right audience.

MS6 spoke about this challenge and suggested a mitigation plan as follows:

"The success stories brand owner has to plan all the expected success stories proactively to be published or announced every 3 months. It is better even to include the current quarter and the next one..."

In summary to brand success stories, changes are required in the processes of promoting success stories and social media impact. The execution challenge is related to the time for promoting the brand success story and which audience to communicate it with.

In conclusion to section 6.3, the three actions and sub-actions of growth of the cloud services-sales booking and cloud consumptions were explored with identified implementation steps, timelines lines and mitigations of challenges expected. There were minority of opinions that were not considered, such as, increasing the number of salespeople, which is not easy to be approved by the corporate management, most of the stakeholders suggested that innovative ideas are required to accelerate booking growth rather than increase the salespeople headcounts.

6.4 Cycle 3 Part III: Project Delivery Excellence

For delivery excellence, there were two actions to implement, namely (1) ensuring execution quality and efficiency related to project delivery, and (2) ensuring client loyalty (by measuring the NPS) and employee cloud impact.

6.4.1 Ensuring Execution Quality and Efficiency Related to Project Delivery

The first action to implement was ensuring execution quality and efficiency related to project delivery, for which the participants suggested the sub-actions in Table 5.2. Most participants agreed that this action requires changes in the employee appraisal planning process and employee performance appraisal evaluation process. MS7 illustrated this as follows:

> *"The employee's skill level influences delivery excellence, so it is important to choose the right skilled team for the project delivery. The project manager has to scrutinize the nominated project team members and validate the skills and level of quality of each one. It is crucial to set expectations for each project team member*

and what is expected from them. Managers have to provide fair feedback to employees in areas that require an improvement...”

MS1 spoke about the periodicity for executing the suggested sub-actions as follows:

“Delivery execution excellence and quality is a continuous process. I suggest that every 3 months, the employee has to receive feedback whether appraising his/her achievements or providing feedback on areas that require improvement.”

While the suggested actions, processes, and owners are within the control of the service line, the challenges are related to selecting impactful employees who can deliver projects and mitigating the growth paradox as early as possible.

MS2 spoke about such challenges and their suggested mitigation plan as follows:

“Project managers have to set the right measures while choosing the project team members, project managers can invite the mid-layer managers to participate in the selection process. The project manager has to set the expectations in terms of what is expected from each project team member, then monitor the executions.”

In summary, to ensure execution quality and efficiency related to project delivery, changes are required in the employee appraisal planning process and employee performance appraisal evaluation process. The execution challenges are related to the selection of highly skilled employees for delivering the projects and mitigating the growth paradox.

6.4.2 Ensuring Client Loyalty (NPS) and Employee Cloud Impact

The second action to implement was ensuring client loyalty (by measuring the NPS) and employee cloud impact, for which the participants suggested the sub-actions in Table 5.2. Most participants agreed that this action requires changes in the collect client NPS process and cloud consumption impact assessment process. MS9 illustrated this as follows:

"Today the service line does not measure NPS or collect the service line impact on cloud consumptions in a structured form. There is no process for it. Hence, I suggested establishing two processes to collect this information, one to collect client NPS process and the other one to assess cloud consumption impact process. The periodicity of collection should be in every project phase exist."

While the suggested actions, processes, and owners are within the control of the service line, the execution challenge mainly lies in how to ensure that the new processes are in execution properly.

MS9 spoke about this challenge and its potential mitigation plan as follows:

"Project managers are the owners to execute the collect of client NPS and assess the cloud consumption impact. These new processes have to be added as

part of the performance appraisal of the project manager, with a target of NPS to achieve, for instance it should be scored as 9 or 10, as an indication to client loyalty to the service line."

In summary, to ensure client loyalty (by measuring NPS) and employee cloud impact, changes are required in the employee appraisal planning process and employee performance appraisal evaluation process. The challenge lies in how to ensure the execution of the new suggested processes to collect client NPSs and assess the cloud consumption impact.

In conclusion to section 6.4, the two actions and sub-actions of project delivery excellence were explored with identified implementation steps, timelines lines and mitigations of challenges expected. There were minority of opinions that were not considered, such as, managing projects the way the company sees right in terms of change management process and project team member selections. Majority of stakeholders suggested that flexibility is required, especially in dealing with public sector clients, in which negotiation strategies might be required especially if it is related to change requests within the projects.

6.5 Cycle 3 Part IV: Project Delivery Cost Optimization and Sustainability

For project delivery cost optimization and sustainability, there were two actions to implement, namely (1) maximizing dependency on remote centres (offshore & nearshore) and (2) implementing project sustainability measures.

6.5.1 Maximizing Dependency on Remote Centres (Offshore & Nearshore)

The first action to implement was maximizing dependency on remote centres (offshore & nearshore), for which the participants suggested the sub-actions in Table 5.2. Most participants agreed that this action requires changes in the business outcome evaluation process (offshore and nearshore hubs), NPS collection process, and governance communication process. MS7 illustrated this by stating:

> *"The delivery quality of remote center employees is crucial for the success of the service line operational efficiency. High-skilled, low-cost employees can support the business needs to maintain proper financial margins. To ensure that, there should be a well-defined process on what is expected from the remote centres and how to measure that. Also, collecting the NPS gives an idea of how the customer perceives the work outcome of the employee, which indicates to management if actions need to be taken. There should be a regular management meeting to review the work quality of the remote hubs, mainly to review the outcome versus what was planned for."*

MS3 spoke about the periodicity for executing the suggested sub-actions as follows:

> *"Each quarter, there should be a management meeting between the service line leader, remote hub leaders, practice managers, sales managers, and project managers to review the execution outcome versus the set plan. Client NPS should be collected after each project phase exit. At the beginning of each fiscal year, the expectations and targets from the hubs should be set and agreed."*

While the suggested actions, processes, and owners are within the control of the service line, two execution challenges exist. They are related to setting expectations properly and managing the growth paradox.

MS2 spoke about mitigating these challenges as follows:

"Leaders of the service line and remote hubs have to ensure that success measures and expectations are well defined and communicated to the employees and project managers. Such objectives have to be clearly set in the performance appraisal plan. Leaders also have to manage the growth paradox effectively by planning proactive the resourcing needs at least 6 months ahead, noting that hiring process can take 3 months, and the upskilling of the new hires with the required trainings and certifications can take another 3 months."

In summary, to maximize dependency on remote centres (offshore & nearshore), changes are required in the business outcome evaluation process (offshore and nearshore hubs), NPS collection process, and governance communication process. The challenges are related to setting clear expectations and objectives as well as managing the growth paradox effectively.

6.5.2 Implementing Project Sustainability Measures

The second action to implement was implementing project sustainability measures, for which the participants suggested the sub-actions in Table 5.2. Most participants agreed that this action requires changes in the sustainability reporting process and the employee recognition process. MS10 illustrated this as follows:

"Today, the service line is not measuring sustainability indicators within the projects. Even though there is an initiative by the company, but it is not happening the way it should be. Hence, there should be an introduced sustainability reporting process that is owned by the project manager of each project, and service line leader should recognize the cases that have achieved 100% or 90% carbon emissions elimination target."

MS9 spoke about the periodicity for executing the suggested sub-actions as follows:

"Project managers have to report the sustainability report after each project phase exists. The service line should recognize the completed projects if they achieve the sustainability measures target."

While the suggested actions, processes, and owners are within the control of the service line, the challenge is to ensure execution discipline and to measure the sustainability indicators set by the company.

MS10 spoke about mitigating these challenges as follows:

"To ensure execution discipline, the service line leader should communicate a clear process to set the expectations of the project managers on what should be done to measure the sustainability indicators. Then, add the

reporting requirements as part of the project manager objectives, to be evaluated during the regular performance review."

In summary, to implement project sustainability measures, changes are required in the sustainability reporting process and the employee recognition process. The challenge concerns how to ensure that the set sustainability measures are reported in each project on a regular basis.

In conclusion to section 6.5, the two actions and sub-actions of project delivery cost optimization and sustainability were explored with identified implementation steps, timelines lines and mitigations of challenges expected. There was minority of opinions that were not considered, such as neglecting working with the remote hubs due to project delivery quality issues, majority of stakeholders suggested working on fixing the quality issues rather than neglecting completely the effectiveness of the remote hubs.

6.6 Cycle 3 Outcome Framework

Table 6.1 presents the cycle 3 outcome framework, outlining the focus areas, followed by the required actions and corresponding sub-actions, in the first three columns. The subsequent two columns detail the necessary business processes to be changed, the change owner(s), and timelines. The final two columns address the challenges associated with executing the actions and provide suggested mitigations. The proposed change owners are based on the stakeholders' perspectives, the outcomes were not discussed directly with the proposed change owners as the cycle 3 deliverable was the framework presented in Table 6.1 ready to be implemented upon obtaining the required company approvals.

Table 6.1: Cycle 3 Findings Framework Stating Processes to Changes, Change Owners, Implementation Timelines, Anticipated Challenges, and Suggested Mitigations

Focus Area	Action	Sub-Actions	Processes to Change	Owners/ Timelines	Challenges	Mitigation Plan
Foundations for success	Promote a cohesive culture and positivity	1- Recognize and award cohesiveness/positivity 2- Implement a 'Team Loyalty Survey' via NPS (team loyalty to the service line) – Detect positivity/ negativity of the team. 3- Execute communication management actions, including: • Strategy • One-to-one reviews (ideas, thoughts, and negative feelings) 4- Conduct performance reviews 5- Execute project phase exit reviews: Measure client NPS (indicates employee impact)	• Recognition and award process • Project phase exit evaluation • Communication plans • Employee performance evaluation • Employee impact rating • Client loyalty evaluation	• Service Line Manager • Service HR Business Partner • Project Manager's Head **Timelines:** Quarterly based on strategy communication, and 1-1 meeting. Every 6 months for performance evaluation, surveys, and impact rating.	Hidden negative behaviour	A mitigation plan by the HR department after understanding the reasons for negative behaviour, with a coaching plan or disciplinary action if the negative behaviour is not changed. The default culture is to support the employee first with the existing company tools and provide the ground for the employee to succeed.
	Develop talent attraction tools	1. Add criteria for talents to hire in the hiring process 2. Create talent attraction tool process	• Employee rating process • Employee hiring process – Add talent criteria	Service-Line Manager Service-Line Practice Managers	Competitive offers from the competition	• Service line has to be ready with alternative plans if talent cannot be retained by possible company offerings.

		3. Recognize client value, employee achievement vs. objectives set, and employees' outstanding contributions 4. Scan/evaluate existing employees against the defined talent criteria 5. Conduct project phase exit review: Measure client NPS 6. Plan one-to-one meetings with employee and manager 7. Assess payroll deviations from job grade salary ranges for evaluation	• Employee recognition process • Communication management process (one-to-one reviews) • Project management methodology – Add NPS as part of phase exit reviews • Employee loss risk assessment	Human Resources Service-Line Business Partner People Manager Project Managers Head Project Managers **Timelines:** Immediate implementation and ongoing continuity		• Succession plans for highly impactful people. Define successors, whether internal or external.
	Design clear objectives and plan career aspirations	1- Set employee objectives 2- Plan career aspirations	Appraisal management plan Career aspiration plan	Service Line Leader Service Line Practice Manager Human Resources Business Partner	Empowerment of managers to recognize and promote their teams upon achieving objectives	Service line leaders should recognize achievements to promote trust with employees. Ensure that employees have the right tools to achieve the objectives. Listen continuously if he has

				Employee **Timelines:** Executed at Month 1 in the fiscal year, re-evaluated every 6 months	Design of objectives and career plans that are SMART (Specific, Measurable, Achievable, Relevant, and Time-bound)	challenges to achieve and offer the support required to mitigate them. Ensure that plans can be updated to mitigate execution challenges.
	Ensure execution excellence/quality	1- Set execution quality and excellence measures 2- Use performance review process to evaluate employee execution quality and excellence	Performance evaluation process Client NPS process Recognition process (by clients, other business lines, and other colleagues)	Service Line Leader Practice (Mid-Layer) Managers HR Business Partner Project Managers Employee **Timelines:**	Job upskilling Mastery of the business process Operational reporting excellence Time challenges	In addition to employee quarterly reviews, enablement training and the upskilling requirements that the employee has to achieve should be planned. Employees must master the business process and ensure the highest level of quality reporting. Manager and employees must assess time versus

				Planned at Month 1 in the fiscal year, re-evaluated every 6 months		work–life balance and ensure that supportive actions are taken to avoid employee burnout due to unmanageable workloads.
Growth of cloud services-sales booking and cloud consumption	Promote sales coverage and value-based solution selling	1- Design efficient sales territories 2- Assign sales territories to the suitable salesperson 3- Reposition service line use cases to the value that matters to C-suite decision-makers 4- Promote new valued innovation use cases 6- Maximize remote sales support to support sustainability 7- Position employee value to clients by promoting the experience of the employee	Sales territory design process Sales territory employee mapping process Business value and innovation use case process Client positioning value process	Service Line Leader Sales Leader Delivery Practice Manager **Timelines**: Executed at Month 1 in the fiscal year, re-evaluated every 6 months	Lack of capable people to run sales activities and own sales targets Growth targets against the service line limits	Ensure that sales is not only done by salespeople, but also by the architects and project manager. Salespeople can focus on acquiring new clients, while architects and project managers can focus on upselling with existing clients. Assess carefully what the service line can head towards as a target to achieve, explain the reasons for upper management avoiding any over-expectation issues, and plan actions accordingly.
	Promote engagement manager role in	1- Define job description of an engagement manager	Employee job description process	Service Line Leader	Ability for an engagement manager to	Managers should assist engagement managers with

	cloud expansion and the Techcelerate program	2- Set work objectives and role success criteria, and agree them with the engagement manager 3- Track progress through regular performance review meetings	Employee appraisal plan Employee performance appraisal	Practice (Mid-Layer) Managers Employee **Timelines**: Planned at Month 1 in the fiscal year, re-evaluated every 3 months	plan his/her time effectively between sales activities and project delivery activities Ability to communicate and manage with an impact with key influencers on the customer side	experiences and views on how to balance their time. Experienced service line leaders should support engagement managers and provide guidance on how to connect and establish an impact and quick wins on the customer side.
	Promote brand success stories	1- Define a branding owner in the service line 2- Create list of potential success stories and client advocates 3- Extend use case values to include the impact on cost, time, and revenues	Success story promotion process Social media impact process	Service Line Leader Sales Leader Sales Representatives	Submission of every new win or project completion on time and to the right audience	Brand success stories must be part of individual performance plans, and execution quality must be evaluated every 3 months.

		4- Create a branding plan with the tools and resources required 5- Execute the branding plan		Practice (Mid-Layer) Manager Service Line Branding Leader **Timelines**: Quarterly		
Delivery excellence	Ensure execution quality and efficiency related to project delivery	1. Assess employee work quality based on feedback from clients 2- List the project managers with a high level of quality in leading projects, and others who might need support and guidance 3- Award the high-quality and high-efficiency cases 4- Assign a mentor to support employees who need help and guidance to improve their work quality 5- Provide training for the new hires and Gen-Os (freshly graduated hired employees) on the basis and foundation of	Employee appraisal planning process Employee performance appraisal evaluation process	Service Line Leader Practice (Mid-Layer) Manager Employee **Timelines**: Quarterly - for evaluation feedback	Selection of impactful project team Growth paradox	Project managers are responsible for the selection of the most impactful project team members. This study recommends validating the quality of the resource by holding a selection interview, in which the practice managers can suggest their evaluation as well. With the accelerated growth plans for revenue, the demand might be higher than the capability of the existing service line employees; hence, the

		execution quality and efficiency				practice managers must continue, as an on-going process, to filter potential candidates from the market for future hiring.
	Ensure client loyalty (NPS) and employee cloud impact	1- Add 'measure NPS' to the project management methodology and execute it at every project phase exit review 2- Add 'measure cloud consumption' as part of the project manager's activities every month and review the consumption trend analysis over time 3- Conduct a service line management team meeting with clients of average or low NPS to understand their view and the potential opportunities for improving the trusted business relationship 4- Implement measures to strengthen the business relationship with clients with a high NPS	Collect client NPS process Assess cloud consumption impact process	Service line Leader Practice (Mid-Layer) Managers Project/ Engagement Managers **Timelines**: At every project phase exit review, the final one after the end of the project	Collection of needed information at the right time at every project phase exit	Add the NPS and consumption impact as part of the project manager's performance appraisal plan.

Project delivery cost optimization and sustainability	Maximize dependency on remote centres (offshore & nearshore)	1- Set success criteria for working with remote hubs and agree on evaluation periodicity 2- Set expectations with the remote centre leadership team about client expectations in the Middle East region (Gulf States & Saudi Arabia) 3- Measure the NPS with clients and assess their perception of the quality of the remote center team's work 4- Run a client feedback evaluation meeting between the service line and remote center management to appraise high-quality work and take actions to improve low-quality work 5- Use sustainability measures to promote remote work to clients during the service sales process and project planning activities with the client	Business outcome evaluation process (offshore and nearshore hubs) NPS collection process Governance communication process	Service Line Leaders Remote Hub(s) Leaders Practice (Mid-Layer) Managers Sales Managers Project Managers Clients **Timelines**: Quarterly for performance evaluation. NPS feedback depends on phase project phase exit reviews timelines 2. At every project phase exit	Employee quality versus service line and client expectations Growth paradox	The service line expectations from the hub must be clearly communicated to the remote hub leaders; success measures for evaluation must be clearly defined at the managerial level; and such measures must be set clearly in the employee objectives. With the accelerated growth, especially in the Gulf States and Saudi Arabia, a growth paradox exists. Thus, the remote hub leaders must plan as early as possible how to supply qualified employees to the service line projects at the same growth rates. Such supply should be aligned with the demand that exists to ensure the smooth execution of projects.

	Implement project sustainability measures	1- Assign a point of contact in each cloud project to monitor and evaluate the execution of a project's sustainability measures. 2- Prepare a sustainability report template that presents the sustainability measures plan versus actuals, and that also reflects carbon dioxide elimination information and the percentage of onsite versus remote delivery 3- Design a recognition award to be used for green projects that have successfully implemented 100%, 90%, or 80% remote delivery	Sustainability reporting process Employee recognition process	Service Line Leader Practice (Mid-Layer) Managers Project Managers **Timelines**: At every project phase exit review, the final one after the end of the project	Discipline to execute project sustainability measures	Ensure project sustainability measures are evaluated in every project as well as set in the project manager's evaluation criteria.

6.7 Chapter Summary

Cycle 3 focused on how to take cycle 2 recommended actions into implementation, and what are the expected implementation challenges and how to mitigate these challenges. The cycle was conducted with 10 participants, whom they advised on the implementation steps of the recommended actions, what kind of processes can be affected by these actions, and who can be the implementation owners that can take the actions into implementation. The discussions also discussed the periodicity of implementing the actions, what kind of challenges that can impact the success of implementing the action and how to mitigate them.

The results obtained during cycle 3 were surprisingly insightful and could not have been predicted prior to the start of data collection. These results provided detailed information, including execution owners, timelines, key challenges, and suggested mitigations at a specific level. It answered the third question of the research questions, and it showed that the actions are in the control of the business leaders. However, the anticipated challenges and suggested mitigations have to be taken into consideration by the business leaders to contain the implementation success risks. As an outcome, framework of cycle 3 has been generated (Table 6.1).

While the sample used in this study was limited and may not encompass the entire spectrum of diversity, such as gender representation, it is important to note that the selection of participants was based on their diverse roles within the service line. Each participant was carefully chosen for their relevant experience and their potential to contribute valuable perspectives to the research aim and objectives as well as resolving research questions, noting that the aim of action research was to generate actionable knowledge within a specific context and not to provide statistical representation to generalise the findings. The contributions of the participants shaped the study's direction and outcomes. Their experiences and perspectives were critical in the development of actionable knowledge.

The next chapter summarizes the action research findings, the evolution of the knowledge and recommendations, and what are the weak areas/ limitations of the action research with the suggested future research ideas.

7 Chapter 7 Conclusions, Knowledge Evolution & Learning Reflections

This chapter summarises the outcomes of the action research. The chapter is composed of five sections, starting with the findings in relation to the research questions, followed by the evolution of actionable knowledge and recommendations, and limitations of the action research, suggestions for future research, and finally, the learning reflections.

The aim of this action research is to create an actionable framework that can allow a cloud computing service line to achieve operational efficiencies (i.e., achieving growth in service line performance and success indicators). Achieving the aim would allow the growth of the company's cloud revenues, expansion of the company market share and career growth of service line employees. Additionally, the feeling of stability and motivation for employees can encourage innovation which impacts positively the value to the company's clients in the market.

The service line has different performance and success indicators, which are listed on Appendix E. The research addressed the impact on the service line indicators in relation to service line employees, customers, business processes, and company sustainability requirements. The project was conducted in three cycles with multiple iterations. Cycle 1 aimed to understand the focus areas that could significantly impact operational efficiency, while cycle 2 aimed to understand the recommended actions for each focus area (the results from cycle 1). Finally, cycle 3 aimed to take these recommended actions into implementation, determine what the implementation challenges could be, and how to mitigate them.

Section 7.1 addresses the findings concerning the research questions; Section 7.2 discusses the evolution of actionable knowledge and contribution to theory and practice; Section 7.3 presents the limitations of the research; Section 7.4 discusses suggestions for future extensions of this action research; and finally, Section 7.5 provides the learning reflections.

7.1 The Findings in Relation to the Research Questions

This section summarises the findings in relation to the research questions and why the research questions were revised after cycle 1. The aim of the project was to explore a framework that could be recommended to the business leaders and stakeholders of a cloud computing technology vendor for achieving operational efficiencies in its service line. The research questions were revised after cycle 1 due to the emergent findings based on stakeholders' views and perspectives, as explained in Chapter 1.

The findings of cycle 1 of the action research were surprising, and defined the research focus areas, these were: foundation for success as working culture, cloud services-sales growth and consumption, project delivery excellence, and cost optimisation & sustainability. It is important to note, as per the participants, that the geographical location where the action research was conducted lack the maturity of the cloud technology solutions offered by the company. Also, there was a complexity to position service solutions that require physical interactions between the client and service line salespeople.

In addition, controlling the customer purchasing behavior is not within the control of the service line employees to change and implement, as it was to be governed by the clients and would require customers to be added to the list of interviewees. Therefore, the following research questions were discussed and agreed upon with the engaged participants after sharing cycle 1 outcomes, which were more relevant to the defined focus areas and would be in the control of the service line in order to influence an organisational change:

1- What are the focus areas in a cloud computing company to achieve operational efficiency in a service line of business?

2- What actions are recommended for future implementation?

3- What are the anticipated challenges and potential mitigation strategies when considering the implementation of the recommended actions for achieving operational efficiency?

The findings of the research have addressed the research aim and objectives and each of the research questions, by shedding light on the focus areas to improve the operational inefficiencies of the service line and providing actionable solutions to enhance performance and customer loyalty. By engaging with stakeholders, analysing the collected data and generating data-driven actionable knowledge, the study has comprehensively answered the three research questions. Consequently, the overall research aim and objectives have been achieved, offering a clear executable framework towards continuous improvement in the service line's operational efficiency.

In terms of political factors, the research primarily focused on the internal dynamics of the service line rather than external political forces, so their influence was not observed. However, the economic impact, particularly due to the COVID-19 pandemic, was significant and influenced the research. Factors such as remote work requirements and changes in customer behavior were observed. The research also highlighted the value of digital transformation in driving operational efficiency, emphasizing its role as the foundation of the digital economy. Socio-cultural factors, such as the social impact on employees and the importance of a positive working culture, were also relevant and shaped the context of the study. Overall, these factors influenced the research findings and provided a comprehensive understanding of the study's context and implications.

It is important to note that the findings have not been formally implemented, however during the project's time supported, some concepts and findings were proposed to implement informally (not as the research outcome), the justification for it was based on the understanding of the organizational concepts and disciplines in relation to the participants views and interpretations. An example to these proposed concepts includes the impact of team cohesiveness, talent attraction tools, and impact of net promotor score. The findings of these propositions were impactful especially into improving the working culture and environment. Also, understanding the clients' feedback in an impactful manner. That was evident by obtaining the highest score of employee engagement in the region of EMEA, for the service line employees in the geographical area under research.

Following is feedback (testimonials) received on the study's outcomes from various roles in the organization:

An employee of an architect role says,

"The implementation of the framework is expected to improve the working environment and relation between employees. The idea of foundation for success gives the message to the employees that they are important. Employee engagement is important to achieve the business outcomes, and such framework encourages our aspirations to be planned and achieved."

An employee of a middle management responsibility says,

"It is nice to see such outcomes, especially those who are new to a role of a people manager. It provides a roadmap to follow with well-defined actions. I can use to test my performance against each of the proposed actions. The framework is enriched with ideas and thoughts that I am sure it will benefit the service line employees and managers."

An employee, who is leading the service line on the regional level, says,

"It is not popular in the company to see such kind of work linking the practice with the academic concepts. Such outcomes are important especially with the market dynamics happen. I believe in working culture, and the findings support the people aspect as well as the other dimensions such as the customers and business processes. I am sure that implementing such outcomes will have a positive impact, however as we all know there might be a resistance to the change proposed. Also, it could be a good idea to think how to ensure having a sustainable operational efficiency and business outcomes."

In summary, the results emphasized focusing on four areas for achieving service line operational efficiency in a cloud computing vendor: foundations for success (as a working culture), the growth of cloud services-sales bookings and consumption, project delivery excellence, and the optimisation of project delivery costs and maintaining sustainability measures.

The next section illustrates the evolution of actionable knowledge and contribution to theory and practice.

7.2 Evolution of Actionable Knowledge, Contribution & Methodology Choice

This section summarises the evolution of actionable knowledge through the various action research cycles, the contribution to theory and practice, and a discussion on the methodology choices.

7.2.1 Evolution of Actionable Knowledge

The actionable knowledge presented in this research, detailed in chapters 4-6 and presented in Table 6.1 framework, was mainly based on the interview responses with participated stakeholders over the three action research cycles. It encompasses insights from other sources, including reflections on the literature review and internal documents that were examined with the key stakeholders during the interviews for validation and building consensuses. By integrating these sources, a comprehensive framework and understanding of the implementation challenges and potential solutions have been provided.

Prior to the start of data collection for the action research, it was difficult to summarise what needed to be done to achieve operational efficiency of the cloud computing vendor's service line. When the action research began, the service line was under the stress of declining margins year over year (negative margin). Hence, it would make sense to say that the focus would be on just fixing the margins (revenues minus costs), which would mean reducing costs or increasing revenue or both. The research questions were initially designed, based on the literature review, to focus on the transformation of salespeople, sales automation, and consumer behaviour. However, the results of the action research cycles were surprising, and results led to changing the research questions and emphasized different directions for addressing the business problem.

The responses collected during the interviews were carefully analyzed and validated with the stakeholders. While there may have been some deviations and varations in individual perspectives presenting different views, the focus was mainly on identifying common themes and patterns that emerged across the participants' views.

This approach allowed for the identification of commonly shared insights, forming the foundation of the actionable knowledge generated.

Moreover, in every action research cycle, the knowledge evolved in a manner that made it easy for the service line stakeholders (managers and employees) to clearly explain what the focus should be for achieving operational efficiency, what kind of projects should be focused on, what recommended actions should be taken, and what the expected challenges to change are and how to mitigate them. Once the research focus areas had been identified, the next step was to understand which recommended actions should be taken as an outcome of the next research action cycle. And then explaining the execution steps to implementing the recommended actions, what implementation challenges could arise, and how to mitigate them.

The literature review played a critical role in enhancing the understanding of various organizational disciplines and concepts relevant to the research topic and guided the examination of these aspects during the data collection process. However, it is important to note that the consensus among stakeholders was primarily based on their perspectives and experiences in an emergent form, rather than solely relying on the literature review. The empirical findings were then analysed in conjunction with the insights from the literature review to assess the practicality and applicability of organizational disciplines and concepts within the specific business context. This process ultimately contributed to the development of actionable knowledge.

7.2.2 Contribution to Theory and Practice

This section illustrates the research contribution to theory and practice, especially from methodology/literature point of view. Section 2.6 explains the key organizational disciplines/concepts underpinning the study and key findings, the findings provided empirical evidence that supports the theoretical foundations by examining the practical implications of the underpinning organizational disciplines/concepts and validating their applicability in the business context of the workplace problem.

The findings contribute to various organizational disciplines/concepts and offer practical insights that can help demonstrate the relevance and applicability of these organizational disciplines/concepts in real-world settings, which allow a deeper understanding of how these organizational disciplines/concepts can function in practice and how they can be adapted to different business contexts. Such action research has a significant practical impact on service line leaders and organizations seeking to achieve and improve operational efficiency and performance in the cloud computing industry, particularly in the Middle East region. The findings offer valuable insights that can influence the design and implementation of new management frameworks, strategies, working culture and practices tailored to the challenges of this context. The modularity of the findings would allow the implementation of the findings in other service organizations, and other geographical places if the business contexts are common. For instance, the working culture (foundation for success) layer would be applicable to many service organizations regardless of the location and technology domain.

The contributions to theory are contingent upon the specific context and circumstances related to the study. They are not intended as absolute findings, but rather as provisional insights that can be subject to further exploration. The findings and conclusions of the research are contextualized within the specific organization and service line, different results might be achieved upon various contexts and assumptions. Hence, the contributions to theory should be understood within the boundaries of the specific research context and viewed as a starting point for further investigation and enhancements.

The results align with Frei's (2008) findings regarding the impact of employees in achieving business outcomes – he suggested a focus on employees, customers, business processes, and funding to achieve business results. Developing talent attraction tools matches with Smith's (2022) and Zahra, Liu, and Si's (2022) arguments that talent and digital disruptors are crucial for retaining a company's competitive edge. The results also align with those of Riisla et al. (2021), who argued that a relationship exists between cohesiveness and performance; hence, performance reviews, evaluation, and an understanding of employee loyalty and feedback are critical and were recommended by the participants. In addition, the results align with Yang, Lee, and Cheng's (2017) and Fischer's (2000) views on the relation between employee performance versus employee learning and creativity. The results showed the importance of the NPS as a method to understand potential future growth with customers, in accordance with Baehre et al. (2022). The results are also in agreement with Kingelin (2020) on the relationship between change management and customer retention requirements, which supports the outcome of employee impact at the customer side and the value impact that the employee creates, and that the client perceives. This finding is supported also by Lakshmi, Sricharan, and Vijayakumar (2020), who linked value impact and innovation with improving customer experience.

Additionally, this research serves as a foundation for future action research projects expanding the practical knowledge of applying and validating the examined organizational disciplines/concepts. The insights gained from this empirical study can be used to inform continuous improvement cycles within the organization, in which service line leaders can refine and adapt their practices based on these findings, by promoting a culture of continuous learning and development. By emphasizing the practical contributions of this study, it serves as valuable input for practitioners and other researchers who are interested in improving operational efficiency in real-world contexts, even if it does not significantly contribute to the development of new organizational disciplines/concepts.

The results obtained from the study are examined in relation to the methodology choices, focusing on the participative and collaborative action research approach, the constructivist and constructionist epistemological stance, and the ontological emphasis on stakeholder engagement. By evaluating the outcomes of the research in light of the methodological decisions, the effectiveness of chosen methods in addressing the complex issue of achieving operational efficiency of a service line within a cloud computing vendor, highlighting the value of involving stakeholders in the research process to facilitate meaningful change within the organization (Creswell and Creswell, 2017).

The participative and collaborative action research approach proved to be highly effective in addressing the issue of operational efficiency. By actively engaging stakeholders in the research process, valuable insights and perspectives were obtained, leading to an understanding of the challenges and opportunities to improve the service line execution framework and promote meaningful change (Kemmis, McTaggart and Nixon, 2014). A clear impact of the stakeholder engagement was the identification of research focus areas and their influence on the research questions, which were aimed at solving the business problem. The collaborative methodology facilitated the co-creation of a tailored business framework that addressed the challenges that exist in the service line. The participative and collaborative action research approach facilitated a gradual creation of knowledge. Through research cycles, the focus areas were defined, the necessary actions for each focus area were identified, and the strategies for implementing these actions were formulated.

The epistemological stance of constructivism and constructionism played a significant role in shaping the understanding of operational efficiency within the service line. By considering these epistemological perspectives, the research findings showed that knowledge is constructed through the collective interpretation of shared experiences, interactions between individuals and understanding of working cultural impact. For instance, the foundation for success layer as part of the results framework showed how working culture can impact the achievement of operational efficiency, while the focus on project delivery excellence and growth cloud services-sales are key perspectives to achieve an impact as well. This stance facilitated the gathering of rich and context-specific insights from the engaged stakeholders, which were valuable in addressing the business problem (Crotty, 2018). The epistemological perspectives started at the thesis time.

The ontological stance emphasized the importance of engaging stakeholders and co-creating knowledge, which greatly contributed to the successful outcomes of the research. By adopting the value of collaboration and shared understanding, the research captured the complex factors influencing the achievement of operational efficiency within the cloud computing service line. This approach not only facilitated the development of a practical solution but also promoted a sense of ownership and commitment among the engaged stakeholders, which can ensure the long-term success and sustainability of the changes to be implemented (Bryman, 2015). For instance, the concepts of team cohesiveness and the development of talent attraction tools emerged as new working terms to be incorporated into the service line's working culture.

The axiological considerations were essential in shaping the research process and its outcomes by placing a strong emphasis on the ethical dimensions of the research. That allowed the creation of an inclusive and transparent environment that acknowledged and valued the contributions of all participants (Mertens, 2014). This axiological commitment to collaboration, transparency, empowerment and ethical conduct promoted a sense of trust and cooperation among the stakeholders, which facilitated the successful development of the service line execution framework.

In the research, I utilized a second-person inquiry approach to explore and understand the experiences and perspectives of engaged individuals. By engaging directly with participants and observing their interactions, I aimed to capture the dynamics and co-construction of meaning. Through interviews and direct observations, I gathered data that provided valuable insights about their experiences in the context of the business problem.

Qualitative methods have been instrumental in achieving contingent, contextualized, and provisional contributions. By gathering rich data throughout the interviews and observations, deep insights within the organizational context and various perspectives were gained, allowing for a detailed interpretation of findings. Qualitative action research proved effectiveness in addressing the original workplace problem and achieving the research aim and objectives by facilitating a deep exploration of the issue, acquiring rich contextual understanding through methods such as interviews and observations. The collaborative nature of qualitative action research promoted stakeholder involvement and ownership, while the iterative process allowed ongoing learning and adaptation. Reflexivity enhances the credibility of findings. Overall, qualitative action research provided a comprehensive understanding, and actionable insights, that contributed to problem resolution. Action research involves an iterative and time-intensive process that requires active engagement with stakeholders. If the necessary resources and time are available, it would support the decision to use action research again to solve contextual business problems.

In summary, the findings enrich theoretical understanding by demonstrating the real-world applicability and adaptability of various organizational disciplines/concepts across different business contexts. The empirical study offers practical insights for improving operational efficiency in the Middle East cloud computing industry. The alignment between the research outcomes and the methodology choices showed the effectiveness of the participative and collaborative action research approach, constructivist and constructionist epistemological stance, and ontological emphasis on stakeholder engagement. The outcomes of the study, resulted in the development of a practical solution and the promotion of a sense of ownership and commitment among stakeholders, which ultimately led to meaningful and sustainable recommended changes to the organization.

The next section illustrates the limitations of the action research.

7.3 Limitations of the Research

This research discussed achieving service line operational efficiency in a cloud computing vendor through establishing a foundation for success layer, growing services-sales cloud bookings and consumption, ensuring project delivery excellence, and promoting project cost optimisation and sustainability. However, some limitations existed in the research. First, this research did not address artificial intelligence tools and their impact on the automation of business processes as a practical reality, which could accelerate the growth of service sales and optimise costs; for instance, a sales chatbot could be used to reduce the dependence on human manpower. The reason for this was the absence of the foundation components for establishing a successful business model that could drive the achievement of operational efficiency, and the view of most participants in cycle 1 to focus on the foundations rather than the automation tools.

Second, the engagement of external participants was not considered whether they were from other business lines within the company or customers. The reason for this was to ensure engaging the stakeholders within the service line and that the execution of the future recommended actions is within the control of the service line. Finally, this research did not address external influences on the service line solutions, such as the impact of solution security, data security, privacy, and confidentially, on the client decision-making process, with could impact the growth of services-sales cloud bookings. Other external influences were also not addressed, such as the impact of inflation, which could affect the service line's operational efficiency. The reason for this limitation was to ensure that the actionable knowledge could be effectively implemented within the scope of the service line. Expanding the sample to include external stakeholders and understanding the client's perspective would require additional resources, and the success of implementation would not be challenged due to limited control over change management at the customer side.

The next section illustrates the suggestions for future research.

7.4 Suggestions for Future Research

While this research has addressed the various reasons that can impact the achievement of operational efficiency in a service line of a cloud computing vendor, other areas could be considered for future research extensions and add value to knowledge. The future suggestions for research presented in this study are closely aligned with the research findings, serving as an extension and expansion of the existing knowledge. While some of these ideas were proposed by stakeholders, they did not receive significant emphasis in this research due to the lack of majority consensus. Nonetheless, these suggestions provide valuable impact for further exploration and contribution to the research topic.

The first area concerns the cloud consumption paradox and its impact on the customer loyalty index – the NPS. While every cloud vendor is keen to increase cloud consumption (usage) through the hosted customers, the customers might not perceive this as having an impactful value, as they could wish to reduce costs while the vendors seek to increase consumption, which would increase the costs for the customers. Hence, a suggested research question can be: How does the cloud consumption paradox, wherein vendors aim to increase cloud usage while customers seek to reduce costs, impact customer loyalty and the Net Promoter Score (NPS) in the context of cloud computing services?

Second, future research can examine the management of working politics. This would require the identification of the business lines that intersect with the service line in their regular working activities to achieve the company's objectives. Then, studies should assess the degree of existing working politics and the views of other business lines, and then prepare an action plan to ensure that working politics are mitigated and managed to support the service line's business plans. One of the important outcomes in this research was the concept of team cohesiveness that can mitigate the working politics between managers and colleagues within the service line, however it might not be guaranteed with other business groups within the company unless team cohesiveness becomes part of the company policy as a foundation for success. Hence a research question can be: What is the impact of working politics on the effectiveness and performance of a service line and its alignment with other business lines, and how can team cohesiveness be promoted on the company level to mitigate these politics?

Third, the research could measure the complexity of the delivered solutions in terms of design and flexibility for use, which could be named the solution complexity index (SCI). This is important to measure as it can indirectly influence the service line's operational efficiencies performance indicators, such as sales bookings and growth within existing clients. Hence, a research question can be: What is the relationship between the complexity of delivered solutions, as measured by the solution complexity index (SCI), and the operational efficiency performance indicators of a service line, such as sales bookings and growth within existing clients?

Finally, future research can be extended to study the impact of employee well-being on operational efficiency, as emphasized by Clifton and Harter (2020) that employee well-being can impact organizational performance. They highlighted how employee well-being can contribute to business success and an engaged workforce. A research question could be: What is the relationship between employee well-being and operational efficiency in a service line, and how does employee well-being contribute to business success and workforce engagement?

The next section illustrates the learning reflections out of the research.

7.5 Learning Reflections

The DBA program improved my managerial skills and practices in many aspects. For instance, I learned how to apply critical thinking in critical business issues and problems and use sense-making in day-to-day business discussions with work colleagues and customers (Smith, 2019). Working in action research improved my capabilities to think in an action group or a team to find new ways to resolve challenging business problems. It also allowed me to improve my thinking skills, apply actions, observe, and suggest changes for improvement (Johnson, 2020). My reflection skills have improved, allowing me to critically analyse problems from multiple perspectives. I have also enhanced my leadership abilities, particularly the transformational leadership style and promoting a positive work culture (Anderson, 2018).

Learning about complex adaptive systems has equipped me with the skills to influence the entire team effectively, aligning them with the corporate strategy, setting goals, and driving execution excellence. By attaching the team to the company brand and establishing shared goals and objectives, while ensuring fair treatment and judgment, the sense of unity and collaboration within the team was promoted (Miller, 2021).

I also learned to analyse business situations from various angles by asking reflection questions on why this is the only action to take and what the other actions that could impact the resolution of business problems might be. Reflexivity was practiced in the various stages including the data collection process and analysis, online and paper journals was used. The action research cycle interviews improved my skills for running discussions with open-ended questions in a manner that would not impose my views. Furthermore, I improved my skills for listening to people and analysing and critiquing what is being said or discussed (Davis, 2019).

Since I started the DBA program, I have carried many job responsibilities as a sales leader, business partner, and technology service line regional leader. Still, I have also faced many challenges related to the market, working politics, team performance, and team cohesiveness. As a result, the DBA program has significantly improved my capabilities to think, reflect, suggest actions, and innovate. The thesis is within my current core role. However, at the top of my business line management pyramid in the Middle East region, achieving operational efficiency is a critical objective for my career success. This action research has allowed me to understand what to focus on to achieve success in my career and ensure growing performance indicators; which recommended actions are required to achieve operational efficiency; and how to mitigate the expected execution challenges (Wilson, 2022). Prior to the submission by a month, I was promoted to the next level, reflecting the positive impact achieved on the service line indicators and the positive team culture that was cultivated.

Sustainability is a crucial topic and the focus of all large organisations in the Middle East region, on how to protect the environment while executing the service line job duties. Sustainability impact is part of the business priorities that service line leaders report on a quarterly basis. Such topics have allowed me to think, plan, add to the strategy, and initiate discussions with my leadership team and key decision-makers on the client side (Al-Mansour, 2023).

The next section illustrates the summary and concluding remarks of the research.

7.6 Summary and Concluding Remarks

While the idea for this research originated from the declining margin of the service line, which was reported as negative, the results suggested focusing on four areas to achieve operational efficiency in the cloud computing vendor's service line including establishing a foundation layer for success, growth of cloud services-sales bookings and consumption, project delivery excellence, and optimisation of project delivery cost and sustainability. The results did not support the automation of the sales process through automation bots, as other necessary actions are required to establish the foundation for achieving operational efficiency.

In addition, the level of cloud solutions' maturity in the market and the selling complexity of enterprise cloud solutions require physical interactions with the client's decision-makers and the service line's salespeople. The research outcomes suggested 11 recommended actions for achieving operational efficiency, along with an implementation plan for how to execute these actions, sub-actions associated and what the challenges and mitigation measures would be. This framework (Table 6.1) addressed the actions in relation to employees, customers, business processes, and sustainability.

The generated framework offers comprehensive details regarding actions, sub-actions, impacted business processes, change owners, timelines, challenges, and mitigations. It is prepared for implementation pending approval from service line leadership to implement. The framework leverages existing service line resources without requiring additional budget allocations, although the service line manager has the discretion to prioritize budget spending on specific actions, such as advanced training for talent attraction. The outcome of the framework did not necessitate the approval of additional resources or headcounts, but instead leveraged the existing roles within the service line.

As a DBA research focused on managerial implications, it was essential to examine the practical applicability of the underpinning organizational disciplines/concepts. The generated framework and actionable knowledge were designed, in a modular form, to provide practical guidance and feasible solutions for service line managers to improve operational efficiency and performance.

As one of the service line leaders, I can play a central role in implementing the recommended actions, upon the approval of the service line business approvers. I cab actively participate in the strategy formulation and decision-making process, provide guidance to the service line team, and ensure actions alignment with our overall business objectives.

Additionally, I can monitor the progress of implementation, and reflect on the execution outcomes versus the research outcomes.

Section 3.7 discusses the quality evaluation of the study, focusing on dependability, credibility, and trustworthiness. The framework developed in this study is modular and can be applied to other service lines within a cloud computing vendor, provided there are similarities to the identified business problem or focus areas. For example, if another service line is struggling with sales growth despite having a strong working culture, managers can utilize the actionable insights generated from this research. Although the framework was developed through action research within a cloud computing vendor, it contains components that can be applicable to other service organizations. These include establishing a foundation for success by promoting team cohesiveness, implementing effective talent attraction tools, and addressing career aspirations.

This action research has a theory and practice contribution for service line leaders and organizations seeking to improve operational efficiency in the cloud computing industry in the Middle East region. The findings demonstrate the real-world applicability and adaptability of various organizational disciplines/concepts in the business context of this research and offer valuable insights that can influence the design of new management frameworks, strategies, working culture and practices, and serve as a foundation for future action research projects.

Nevertheless, the research had some limitations in terms of the impact of artificial intelligence, and external influences such as inflation. However, the research provided a framework for service line leaders in a cloud computing vendor that would allow operational efficiency to be achieved. Such a framework could allow service line leaders or managers to organise their thoughts and ideas, plotting a clear road to achieving an operational efficiency. Automation through artificial intelligence could lead to an impactful outcome, but it should be executed as the next phase after building the recommended framework that can drive success.

Key learnings out of this action research were improved leadership and managerial skills as well as the ability to lead strategy and execution discussions with the company stakeholders and leadership team to achieve operational efficiency. The research outcome is at the core of the researcher's career and job role's success. It has provided a clear path for what needs to be done to achieve operational efficiency in a service line in a cloud computing vendor.

As a researcher, I ensured rigor in the qualitative study through research design, application of methods, rigorous data analysis, member checking, triangulation, and reflexivity, aiming to produce reliable and valid findings. If I repeat the action research, what I can do differently is to examine how to ensure sustainable operational efficiency upon the implementation of the generated framework.

In conclusion, the study examined the operational efficiency challenges that impact a service line in a cloud computing vendor. The results emphasised the importance of stakeholder engagement and provided a framework that can be used by the service line stakeholders to achieve operational efficiency and protects the service line performance indicators.

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8 APPENDICES

8.1 Appendix A: Detailed Activities Per Research Time Period

Table A.1 explains the detailed performed activities for each time period.

Table A.1: Detailed Performed Activities per Each Time Period

	Timelines	Activities Per Research Steps
1	M1*-M6 *M1: Dec. 2019	• Preparation: Activities in this step include the identification of areas of interest, topic selection, creation of templates such as Participant Information Sheet (PIS), consent form proposal write-up, ethical approval, and research proposal approval. The average duration of these activities took six months. • Literature Review: The initial literature review required for the proposal write-up took an average of three months. • Definition of initial research questions (RQs) based on literature review.
2	M7 – M12	• Introduction: First version of chapter 1 as introduction. • Methodology: First version of chapter as methodology. • Literature Review: Revision prior cycle 1 start. • Interview protocol of cycle 1.

		• Start of Cycle 1: Data collection, data analysis and findings. Outcome was the first version of chapter 4 as cycle 1 – Define focus areas.
3	M13 – M18	• Change of research questions according to the outcome of cycle 1 and validation with engaged participants. • Literature Review: Reviewing literature after identifying research focus areas. • Interview Protocol of cycle 2. • Cycle 1: Completion of cycle 1 activities. This activity was cyclic with participants and results were shared with engaged participants. Total duration was five months, starting from M11. • Start of Cycle 2: Data collection, data analysis and findings. Outcome was the first version of chapter 5 as cycle 2 – Define recommended actions.
4	M19 – M24	• Literature Review: Reviewing literature after identifying recommended actions. • Cycle 2: Completion of cycle 2 activities. This activity was cyclic with participants and results were shared with engaged participants. Total duration was six months, starting from M18. • Interview protocol of cycle 3. • Start of Cycle 3: Data collection, data analysis and findings. Outcome was the first version of chapter 6 as

		cycle 3 – How to take actions into implementation with challenges and mitigation.
5	M25 – M30	• Cycle 3: Completion of cycle 3 activities. This activity was cyclic with participants and results were shared with engaged participants. Total duration was five months, starting from M18. • Chapter 7: Starting the writeup activity of the project research conclusions.
6	M31 – M36	• Introduction, Methodology, Literature: Second version after maintaining supervisor feedback, including the literature review after identifying how to take actions into implementation. • Chapter 7: Completion of first version writeup.
7	M37 – M42	• Receiving second reviewer comments. • Introduction, Methodology, Literature: Second version after maintaining second reviewer feedback. • Fixing second reviewer comments for entire research document. • Submission of research document after revision by supervisor.

8.2 *Appendix B: Interview Protocols*

Title: Achieving Operational Service Line Efficiencies in a Cloud Computing Technology Vendor

Interviewer: Mohammed Sherif **Date:**

1. **Introduction**

To Interviewee:

Summary to Interviewee

Operational efficiency is an area of focus at the company that sells enterprise software and hardware services to the market, based on cloud computing technology. Such a focus is to ensure the best utilization of the human capital and effective use of organizational resources. Selling enterprise software services and solutions is a complex process, and it requires consultative capabilities. With the rise of the experience economy and technological advance, there are experience patterns evolved out of cloud computing services that can suggest improving operational efficiencies. The research explores, in the era of COVID-19 pandemic, the possibilities to improve and achieve operational efficiencies and business KPIs.

8.2.1.1 Interview Protocol – Procedural Guide – Cycle One

Actions Prior Starting the Interview (*Applicable to Cycle 2 & 3*)

- The researcher is to ensure interviewee read PIS form, and clarify any question by the interviewee.

- The researcher is to ensure interviewee signs the consent form, and send it by email to researcher email ID at University of Liverpool: mohammedsherif.mohammedalyhassan@online.liverpool.ac.uk.
- The researcher is to ensure interviewee understands the planned research cycles.

Cycle 1	Understand interviewee's view on problem statement, assumptions and what would be the focus areas of the research	An average interview of 45-60 minutes for first interview Another 15-20 minutes as 2nd interview for validation of received inputs from other participants	• Importance of action research • Most important research questions • Validation of deliverables • Validation of assumptions • Research focus areas (themes) • Research limitations • Suggestions
Cycle 2	Define actions/ and sub-actions for future recommendations	An average interview(s) of 90-120 minutes Another 30-60 minutes as 2nd interview for validation of	• Define the key actions per each focus area defined in cycle 1 • What are the sub-actions to be implemented per each recommended action

		received inputs from other participants Another 45-60 min to define the sub actions per each defined action	
Cycle 3	How to take recommended actions into implementation & anticipated challenges/mitigations	An average of 60-90 minutes Another 30-45 minutes as 2nd interview for validation of received inputs from other participants	• Implementation plan • Implementation assumptions • Outcomes, obstacles & challenges • Risks & Mitigations • Further suggestions or improvements

- The researcher is to describe to interviewee the research emergent approach, and avoidance of researcher influence or power use on research outcomes.
- The researcher is to describe to the interviewee the planned recording procedures of the interviews.
- The researcher is to describe ethical standards and ask questions immediately if feeling uncomfortable, participation is voluntary, how his/her information is

protected, and how research progress is reported during the research time. Participation is not related to any exploitation.

Interview Protocol – Cycle One

Iteration 1:

Research Importance
• Prompts:
    o Importance to company
    o Importance to individuals
    o Importance to others
	• Tell me your opinion about the research.
	• How do you feel about its importance.

KPIs • Prompts: o Seven KPIs	• Describe the current KPIs from your view • How do you feel would be the focus KPIs to consider

Research Questions & Deliverables
• Prompts:
    o KPIs
    o Revenues Vs Costs (Direct or Indirect)
    o New Services/ Existing Services
    o Channels
    o Purchasing Behavior
	• Tell me what you expect to be answered as an outcome of the research
	• What deliverables you aim to be generated out of the research

Focus Areas
• Prompts:
    o New Services/ Existing Services – XaaS/BaaS
    o Channels – Autonomous Agents
    o Purchasing Behavior – Online buying agents
    o Experience economy
    o Digital economy/ COVID-19
    o Artificial Intelligence
	• Imagine what would be the focus areas of the research to achieve the aimed outcome
	• Thinking of these focus area(s), tell me what assumptions you see have to be considered
	• Do you feel any limitation has to be noted

○ Solution-in-a-Box	
Suggestions	• Tell me if you feel other suggestions can be relevant to the research

Iteration 2:

- Do you agree if the following theme <Mention_Theme> is critical to focus on being impacting the operational efficiency?
- Please share your opinions about the following interpretations <Mention_Generated_Codes>

Iteration 3:

- Following is the outcome as emergent themes, how is your view on the outcome?
- Do you suggest any modifications suggestions? Re-Grouping of generated codes under a new theme?

Interview Protocol – Cycle Two

The researcher shares the outcome of the previous cycle, and ensure all inquiries by the participant is answered.

Iteration 1:

[redacted]

Foundation for Success (Working Culture)
• Keywords:
  ○ #Cohesive team, #LifeLong Learning, #Talents, #Excellence, #Positive Deviants, #Respect
• Prompts:
  ○ Talent Attraction Tools
  ○ Talent Hiring Criteria
  ○ Career Development
  ○ Career Aspiration
  ○ Execution Excellence
	• Tell me your opinion about foundation for success on what needs to be done to achieve operational efficiency within the defined focus areas.
	• Describe the suggested changes to the existing processes
	• Tell me about the owner you see per each proposed change.
	• How do you feel about new initiatives, functions, or improvements to be added?
	• How do you feel the most important things to be implemented out of what you have suggested (like top 3).

Delivery Excellence
• Keywords:
  ○ #Positive Deviants, # Digital Disruptors, , #LifeLong Learning, #Upskilling, #MBOs, #Collaboration, #Branding, #StoryHubs, #Innovation, #Customer Obsession, #Net Promotor Score, #Sunstainability
• Prompts:
  ○ Talent (acquisition, learning, retention)
  ○ Value Impact (client value realization, appraisal process, client satisfaction)
  ○ Revenue Growth (methods, revenue/head, catalogue and reusable asset)
	• Tell me your opinion about delivery excellence on what needs to be done to achieve operational efficiency within defined focus areas.
	• Describe the suggested changes to the existing processes
	• Tell me about the owner you see per each proposed change.
	• How do you feel about new initiatives, functions, or improvements to be added?
	• How do you feel the most important things to be implemented out of what you have suggested (like top 3).

Cost Reduction • Keywords: ○ #Low Cost Vs #High Impact, #Extended Delivery Arms, #Remote Hubs, #Hidden Costs • Prompts:	• Tell me your opinion about Cost Reduction on what needs to be done to achieve operational efficiency within defined focus areas. • Describe the suggested changes to the existing processes

- Project Costs - Hidden Expenses Control - Low-Cost Remote Centers	• Tell me about the owner you see per each proposed change. • How do you feel about new initiatives, functions, or improvements to be added? • How do you feel the most important things to be implemented out of what you have suggested (like top 3).

Sales Booking
• Keywords:
  ○ #Sales_Territories
  ○ #Areas_of_Growth (Where money is)
  ○ #NPS
  ○ #Employee_Impact
  ○ #Delivery_Excellence_Impact
  ○ #Reusuable_Assets
• Prompts:
  ○ Type of Projects
  ○ Assets, Experiences and References
  ○ New Services
	• Tell me your opinion about Sales Booking on what needs to be done to achieve operational efficiency within defined focus areas.
	• Describe the suggested changes to the existing processes
	• Tell me about the owner you see per each proposed change.
	• How do you feel about new initiatives, functions, or improvements to be added?
	• How do you feel the most important things to be implemented out of what you have suggested (like top 3).

Areas of Future Research Expansion	• Imagine what would you consider as a future expansion for such research • Tell me what assumptions you see, have to be considered • Do you feel any limitation has to be noted
Suggestions	• Tell me if you feel other suggestions can be relevant to the add.

Iteration 2:

- For the defined emergent theme <List the focus area>, please validate the following actions as emergent themes and interpretations as defined codes.
- For these actions, what would be the priority of implementation.

Iteration 3:

- For the recommended action: <Mention_Action>, please identify the required sub-actions to be taken into implementation.
- How do you see the sequence of implementation of these sub-actions?

Interview Protocol – Cycle Three

The researcher shares the outcome of the previous cycle, and ensure all inquires by the participant is answered.

Iteration 1:

How to Take Defined Action into Implementation
• Keywords:
  ○ #Change_Owner
  ○ #Employee
  ○ #Customer
  ○ #Business Process
  ○ #Sustainability
• Prompts:
  ○ Validate actions taken into implementation against the key defined pillars (Employee, Customer, Business Process, Sustainability)
  ○ Validate if the action is within the execution power of the service line. If not, validate back with the interviewee.
	• Tell me your opinion about how to take <mention the action> into implementation. (This open question is repeatable to every defined action).
	• Who should be the owner of executing this action < mention the action >
	• What should be the frequency of implementation the action <mention the action>.

o Understand/Validate if the action fulfils the strategy and priorities of the service line.	
Challenges & Mitigation • Keywords: o #Change_Owner o #Employee o #Customer o #Business Process o #Sustainability • Prompts: o Validate if the challenges mentioned make sense, and are feasible in the scope of the service line to deal with. o Validate if the suggested mitigations are practical and can be in the scope of the service line to take actions. If not, explore with the interviewee.	• Tell me your opinion about the expected challenge(s) to implement the action <mention the action>. (This open question is repeatable to every defined action). • Tell me your opinion how can the service line mitigate such challenge(s) to implement the action <mention the action>. (This open question is repeatable to every defined implementation challenge).

Iteration 2:

- For the emergent perspectives <mention_details – Business process, owner, timelines>, validate with the participant his/her agreement, to build consensus.

Iteration 3:

- For the emergent perspectives <mention_details – challenges and mitigations>, validate with the participant his/her agreement, to build consensus.

Interview Closure:

Researcher to share with interviewee the expected next actions, and that it might need further contact if clarification is needed concerning the collected information.

8.3 *Appendix C: Model Consent Form*

Participant consent form
Version number & date: *Version 1.0/ Jan 1, 2020*
Research ethics approval number:
Title of the research project: *Achieving Operational Service Line Efficiencies in a Cloud Computing Technology Vendor*
Name of researcher(s): ***Mohammed Sherif Mohammed Aly Hassan***

Please initial box

1. I confirm that I have read and have understood the information sheet dated **Jan 1, 2020** for the above study, or it has been read to me. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that taking part in the study involves *an interview carried out remotely with the researcher to capture information,* which will be collected through written notes and voice recording (voice recording will be destroyed after information is transcribed*)*.
3. I understand that my participation is voluntary and that I am free to stop taking part and can withdraw from the study at any time without giving any reason and without my rights being affected. In addition, I understand that I am free to decline to answer any particular question or questions.
4. I understand that I can ask for access to the information I provide and I can request the destruction of that information if I wish at any time prior to 1 month before anonymization takes place, expected time for the start of anonymization is: 6 months from Interview time. I understand that following the process of anonymization, I will no longer be able to request access to or withdrawal of the information I provide.
5. I understand that the information I provide will be held securely and in line with data protection requirements at the University of Liverpool until it is fully anonymised and then deposited in the *archive* for sharing and use by other authorised researchers to support other research in the future.
6. I understand that signed consent forms and original audio/video recordings/ questionnaires will be retained in laptop of the researcher until completion of the thesis phase.
7. I agree to take part in the above study.
8. I understand that other authorised researchers may use my words in publications, reports, webpages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.
9. I understand that personal information collected about me that can identify me, such as my name or where I live, will not be shared beyond the study team.

Mohammed Sherif Mohammed Aly Hassan

Participant name Date Signature

Name of person taking consent Date Signature

Principal Investigator
[**Name**]
[**Work address**]
[**Work telephone**]
[**Work email**]

Student Investigator
[**Name**]
[**Work address**]
[**Work telephone**]
[**Work email**]

8.4 *Appendix D: Participant Information Sheet (PIS) Template*

Participant Information sheet (PIS)

1. **Title of Study**

Achieving Operational Service Line Efficiencies in a Cloud Computing Technology Vendor

2. **Version Number and Date**

Version 1, Date: Apr 1, 2020

3. **Invitation Paragraph**

You are being invited to participate in a research study. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and feel free to ask us if you would like more information or if there is anything that you do not understand. Please also feel free to discuss this with your friends, relatives and GP if you wish. We would like to stress that you do not have to accept this invitation and should only agree to take part if you want to.

Thank you for reading this.

4. **What is the purpose of the study?**

Operational efficiency is an area of concern at our company, which focuses on selling cloud computing technology services to the market, on how best to utilize our human resources, and how we can achieve the same or better revenues with fewer employees. Under economic growth stress and the need to protect the margins of our line of business, our service sales role has been transformed into a solution role, with the justification of transition toward experience economy selling, associated with a change of the pay scheme from sales commissions-based to a bonus-based scheme in which the margin of our line of business affects the payment amount directly.

With the rise of cloud computing technology and change in consumer behavior due to experience economy, automating the sales process can play a role in improving operational efficiency (e.g., usage of autonomous consumer buying agents that can reduce the dependency on the human field sales role). My purpose is to create actionable knowledge that can achieve operational efficiencies in our line of business.

5. **Why have I been chosen to take part?**

I have defined the required roles for the research, such as being a sponsor, change agent, knowledge broker, reflective scientist, and process facilitator. I have defined various participants with each role who has the core experience as well as the level of seniority that can drive change and can challenge the action research recommendations.

6. **Do I have to take part?**

Participation is voluntary -- participants are free to withdraw their participation at any time, without explanation, and without incurring a disadvantage.

7. **What will happen if I take part?**

Following are important information that might be required to be answered by the researcher to the participant about the research details:

- ***Who will be carrying out the procedure:*** *This will be carried by myself - Mohammed Sherif, Client Solution Director. The research procedures will be organized and managed* *by the researcher, the researcher will advise the participant on the periodic meetings (remote meetings due to COVID-19 situations) and actions planned, as well as the next action items.*

- ***What is the researcher role and why he is undertaking the research**: The researcher takes the responsibility to communicate, transfer, share and exploit the actionable knowledge in a collaborative manner with the research participants in action research in an aim to achieving operational service line efficiencies in the researcher's company to obtain a doctorate of business administration degree.*
- ***What is the duration and frequency of the procedure:** 6-9 months with an expected results validation session to be incurred every 3 months, this might be 2-3 times occurrence, or more depending on the progress of the research work and action plan.*
- ***What are the participant's responsibilities:** The participant will provide his/her views on the research questions and will participate in the action items of the research in terms of suggestions, opinions, and information integration. The participant can add recommended action items that can improve or resolve the raised business problem and can contribute to the knowledge creation process.*

Please be aware that during the data collection and interview process, the researcher will ask the participant to have an audio recording of the interview for the purpose of writing the details back after the interview takes place; these recordings will be destroyed immediately after the data is collected in the word version of the research documents, which is expected to be no longer than 3-4 months of the interview process.

8. How will my data be used?

The University processes personal data as part of its research and teaching activities in accordance with the lawful basis of 'public task', and in accordance with the University's purpose of "advancing education, learning and research for the public benefit.

Under UK data protection legislation, the University acts as the Data Controller for personal data collected as part of the University's research. Dr. John Byrom (j.bryom@liverpool.ac.uk) acts as the Data Processor for this study, and any queries relating to the handling of your personal data can be sent to Dr. John Byrom (j.bryom@liverpool.ac.uk).

Further information on how your data will be used can be found in the table below:

How will my data be collected?	Via written notes, and recorded audio.
How will my data be stored?	On secured files (protected by access passwords), physical notes will be stored in secured place only accessible by the researcher and will be destroyed after data is converted into electronic form.
How long will my data be stored for?	During the planned research time, with a following period of 1 year. Data will be electronically secured by an access password.
What measures are in place to protect the security and confidentiality of my data?	For electronic data – it will be secured by an access password. Final versions of research documents will be uploaded to the University servers. Physical notes will be stored in a locker that has access by the researcher only, and will be trashed by a trashing machine after it gets converted electronically.
Will my data be anonymised?	Yes. The interviewee's name as well as any demographic information about the participant will not be captured in any document or data captured, instead each interviewee will have

	a code that doesn't indicate any personal information about him/her, for example: P1 (refers to participant 1).
How will my data be used?	Collected data will be analyzed to capture the occurrences and debates between the various participants in reflection with the listed action items/recommendations versus the captured results during the course of the research time. Data collection will be done through semi-structured interviews, the interviews are intended for the stakeholders that share the co-creation of the firm's strategy and those that control the financial decisions, aiming to understand the different experiences of workplace problem, their anticipations, expectations and challenges to be considered. The target is to collect the data and construct the targeted list of recommendations and change management plan.
Who will have access to my data?	Researcher and Research Supervisor
Will my data be archived for use in other research projects in the future?	No
How will my data be destroyed?	Electronic file that are secured and protected, will be destroyed after one year from research completion by files deletion. Manual notes/ Physical documents will be destroyed after data is converted electronically by a trashing machine.

9. **Expenses and / or payments**

There are no expenses to be paid for participating in this research.

10. Are there any risks in taking part?

There are no foreseen risks that can be countered as part of participating in this research, including any type of risk that can be categorized as physical, psychological, social, legal and economic risks. If the participant experiences any kind of discomfort or potential distress due to involvement in a project that is impacting on people as part of the research -- then this should be made known to the researcher immediately, and the participant has the right not to volunteer for the research. There is no linkage between participation in this research and participant performance appraisal, evaluation or future career impact due to my role in the company and his/her participation.

11. **Are there any benefits in taking part?**

Selection of the participants is based on experience in the field, hence the advantage of taking part can be seen as the results associated with the research work will be made available to the participants. Participation is voluntary and not coercive, there is no linkage between participation in this research and participant performance appraisal, evaluation or future career impact due to my role in the company and his/her participation. If the participant feels under any sense of coercion to participate in the research, s/he should inform the researcher and escalate this officially.

12. **What will happen to the results of the study?**

The results will be made available to the participants, and the results will not be published without the approval and consent of participants.

13. **What will happen if I want to stop taking part?**

Results are planned to be anonymized, participants can withdraw their participation in the study at any time, without explanation, only before 1 month of the anonymization process, which is planned to be 6 months after the interview process.

In case if a participant wants to withdraw the participation, s/he needs to notify the researcher by email or phone to process the request, that will be followed by a confirmation from the researcher to the participant.

14. What if I am unhappy or if there is a problem?

If you are unhappy, or if there is a problem, please feel free to let us know by contacting (1) Researcher, or further to (2) Researcher's manager (Kyriakos.Rigas@oracle.com) if support required is related to researcher's company, or further to (3) Dr. John Byrom (J.Byrom@liverpool.ac.uk) if support required is related to academic work, and we will try to help. If you remain unhappy or have a complaint which you feel you cannot come to us with then you should contact the Research Ethics and Integrity Office at ethics@liv.ac.uk. When contacting the Research Ethics and Integrity Office, please provide details of the name or description of the study (so that it can be identified), the researcher(s) involved, and the details of the complaint you wish to make.

The University strives to maintain the highest standards of rigour in the processing of your data. However, if you have any concerns about the way in which the University processes your personal data, it is important that you are aware of your right to lodge a complaint with the Information Commissioner's Office by calling 0303 123 1113.

15. Who can I contact if I have further questions?

For any further questions or clarifications, you can contact:

Research Supervisor: *Dr. John Byrom (email: J.Byrom@liverpool.ac.uk*)

Researcher: *Mohammed Sherif (email: mohammedsherif.mohammedalyhassan@online.liverpool.ac.uk)*

8.5 *Appendix E: Performance & Success Indicators of Service Line*

The following table explains the performance and success indicators of the service line:

Table E.1: Description of Service Line Performance and Success Indicators

Service Line Performance & Success Indicators	Description
Revenue	Presents the time-efforts of the project delivery that employees incurred, after multiplying by the average daily rate of the employee in a project.
Cost	Project costs required to deliver the signed projects; it includes the employee costs in terms of salaries and logistics, such as the office requirements, materials, and tools needed to execute her/his job; and the company employee allocation costs, such as the end of service costs.
Margin	Difference between revenues and costs.
Services-Sales Booking	The booked orders related to implementation projects indicate the amount of revenue that can be delivered within a period of time.
Employee Project utilization	The level of utilisation of resources is the time consumed in billable activities in projects. The lower the utilisation, the higher the risk that an employee can

	be as a potential redundant. The company considers 75% utilisation to be a reasonable average utilisation percentage.
Average Daily Rate	It is total revenue divided by the full billable days in the whole delivered projects within a period; a higher amount suggests a better indication of the margin. The company captures the trend of this rate in explaining whether there is a healthy way to achieve the margin. A declining trend suggests that planned projects would require more effort than planned; this could happen as a result of delayed projects due to product issues, also it could be a future indication of reducing the margin.
Subcontractor Costs	Are the fees the company pays to external employees if the company outsources part of the project to another company; for instance, the line of business outsources a portion to implement a specific scope in the project. The company is keen on lowering such subcontractor costs and utilizing its internal employees as much as possible.
Cloud Consumption	It is a success indicator that measures the contribution of the service line in the cloud consumption results. For instance, if the service line implemented three projects out of the top ten cloud consumers. Then the service line contribution to cloud consumption in the top ten is 30%.

8.6 *Appendix F: Reflections on Cycle 1 Outcomes and Literature Review*

Through reflecting on the cycle 1 findings and outcomes with the literature review, areas of agreement, gaps, and areas that might seem irrelevant to the geographical region where the research was conducted (i.e., the Middle East region covering the Gulf states and Saudi Arabia) were found.

First, the areas of agreement with the literature are discussed. Frei (2008) and Smith (2022) have suggested attracting the right skilled and talented people to achieve business outcomes and have clearly defined objectives per employee, which is aligned with the participants' views. This view was supported by Zahra, Liu and Si (2022), who discussed hiring digital disruptors. The criteria that define a digital disruptor were a part of the cycle 2 discussions. The outcome supported Riisla et al. (2021) views that without team cohesiveness, trust cannot be established, which could have a direct negative impact on business outcomes.

Regarding the impact of diversity and lifelong learning, the majority of participants views were in alignment with Dutta, Peng and Choudhary (2013) as well as Milosevic (2016). As of January 2022, the percentage of women in the service line was low who can demonstrate impactful value to clients [As per the company policy, releasing gender percentage at a department level is not allowed]. Lifelong learning is crucial to the service line as it leverages the employee experience and hence the value in front of customers.

Baehre et al.'s (2022) view regarding the uses of NPS received agreement as the service line today lacks a mechanism, as a process, for measuring customer loyalty and its impact on future sales momentum. Moreover, the outcome supported the views of Lauer (2010) and Kingelin (2020) on change management as delivery excellence cannot be achieved without it.

Regarding value-based technology offerings and the role of innovation, the outcome supported the views of Willcocks and Lacity (2018) as well as Buhalis and Yen (2020) and suggested capitalizing on service-line reusable assets and success stories to replicate for new customers. However, the outcome suggested that XaaS, discussed by Wenzel (2018), is at an early stage in the Middle East region. Moreover, the outcome supported the views of Tsai, Lai and Hsieh (2022) as well as Chang, Wills and De Roure (2010) regarding the importance of sustainability as it can open new sales offerings. Furthermore, the outcome supported the views of Rosen (2017) as well as Jarvenpaa and Mao (2008) regarding capitalizing on sustainability objectives to optimise costs as it can align with what customers want to do. Regarding business processes, the participants agreed with Classen et al.'s (2019) suggestion regarding the introduction of innovation patterns to improve the efficiency of business processes.

Second, regarding the gaps between the literature and cycle 1 outcomes, linking the performance indicators with the pillars defined by Frei (2008), i.e. agreement on employees, customers, and business processes, but not on the financial funding. This is because the mentality of the employees who participated in the interviews was performance indicators-driven, which makes sense as this is how the company tracks its business results (as indicators oriented). One of the contributions of this research work lay in finding a framework that can connect the performance indicators with the business pillars defined by Frei (2008). Participants agreed on the importance of employees, customers and business processes as business pillars, but not on financial funding; instead, they suggested sustainability due to the existing funding mechanism through the sales booking process. Moreover, sustainability is becoming a business priority for the company as set by the strategy team.

Third, in terms of irrelevant areas, the idea of online marketplaces to accelerate enterprise application sales suggested by Wenzel et al. (2012) was not accepted in a region such as the Middle East due to the complexity of selling enterprise services and the need to have face-to-face interactions with decision-makers. The participants considered that online buying centres might be suitable for small businesses with standard feature solutions. XaaS and Business-as-a-Service (BaaS), discussed by Wenzel et al. (2012) as well as Li, Biennier and Amghar (2012), did not receive support from the participants due to the maturity level of cloud computing technology in the region. Furthermore, some of the participants felt that at least 3–4 years are required before an impact will be seen on the ground. The Service-in-a-Box offering suggested by O'Neil (2014) also did not receive support by the participants due to the complexity of integration requirements between the service-line offerings and other technology vendors as well as participants’ view that it will take several years to reach.

In addition, Weber et al.'s (2020) view on automating the sales process through sales bots was not considered relevant by the participants due to the complexity of the sales process. They felt that it can be used for marketing purposes but not for sales transaction automation. Moreover, the concerns regarding information security discussed by Saa et al. (2017) did not receive a majority agreement despite being important; however, as of January 2022, the company offers private cloud infrastructure to governmental entities, which resolves these challenges.

8.7 *Appendix G: Setting Service Line Targets for Operational Efficiency*

The following table explains how to set the targets of the service line to maintain operational efficiency based on the input received by MS11 (service line finance partner), it demonstrated the relationship between employee headcounts, revenue, cost, and sales targets for planning budgets for operational efficiency.

Table G.1: Setting Service-Line Targets for Operational Efficiency

	Steps	Assumptions	As an Example,
Step 1	Identify number of headcounts within the service line	Including all sales and delivery employees	Assuming Number of Employees = 30
Step 2	Identify revenue/ head	As per finance department guidance, company finance sets US $300K/head in the Middle East region (applicable to Saudi Arabia and the Gulf states)	Total targeted revenue to achieve = 30 × 300,000 = US $9,000,000
Step 3	Identify ratio of revenue to backlog (signed contracts to be delivered)	As company finance guidance, the ratio should be 150% (assumption some projects takes longer time more than a year to deliver)	Sales targets should be US $9 m × 150% = US$ 13.5 m
Step 4	Identify cost target	As a company finance guidance, profit margins should be 25%	Cost is US $9 m × 0.75 = $6.75 m
Step 5	Identify sales targets	As per company finance guidance, the benchmark for achieving sales targets is 65–75% as a success rate (average annual sales achievement vs set sales targets)	Targeting $13.5 m for achieving with 65% sales success rate, total sales target spread to sales employees: $13.5 m × 100/65 = US $20.76 m spread
Step 6	Identify number of salespeople	As company finance guidance, an average services sales employee target should be US $4–6 m	US $20.7 6 m/ US $5 m average target = 4.15 sales heads Hence, the number of sales employees

			should be four or five

8.8 *Appendix H: Sample Keywords and Phrases Used in Literature Review Search Process*

The following table shows a sample of used keywords and phrases used during the literature search process:

Table H.1: Phrases and Keywords Used as Part of the Literature Review Searching

	Category	Search Keywords & Phrases
1	Evolution of cloud computing technology and advantages	Cloud computing, evolution of cloud computing, advantages of cloud computing, what is a cloud computing?, impact of cloud computing on organization performance, financial impact using cloud computing technology, capital expenditures, operational costs, cloud computing and competitive advantage, cloud computing and market dynamics, cloud computing and new revenue streams, cloud usage, cloud consumption
2	Associated business dynamics	COVID-19 business impact on the information technology industry, COVID-19 and technology growth, cloud computing and experience economy, COVID-19 impact on cloud computing growth, distance economy, digital meetings.
3	Importance of Service Line operational efficiency in a cloud computing vendor	Service line efficiencies in a cloud computing vendor, what impacts service performance in a cloud computing vendor, how to improve service performance in a cloud computing company, cloud computing value-based solution, cloud computing and innovation, the relation between cloud computing and efficiency, growth and efficiency paradox in cloud computing business, shareholder expectations with cloud computing

		vendors, employee instability impact, employee outperformance, what affects employee innovation
4	How to achieve operational efficiency in a service line of a cloud computing technology vendor	How to achieve operational efficiency in a service line in cloud computing, key performance indicators in a cloud computing vendor, what impacts service line performance?, employee impact on organizational performance, how to retain talents, talent attraction tools, digital disruptors, technical pioneers, impact of team cohesiveness, how to achieve team cohesiveness, how to encourage innovation and outperformance, impact of diversity, impact of lifelong learning, impact of team collaboration, how to encourage collaboration, what affects the customers purchasing behaviors, how artificial intelligence can improve operational efficiency, how artificial intelligence can accelerate the decision making process, how to measure client loyalty, what is net promoter score, how to improve client net promoter score, how to accelerate customer adaption to cloud computing technology, what is the role of change management in cloud computing adaption, impact of value-based offerings, and innovation, what is everything-as-a-service, what is business-as-a-service, cloud solution-in-a-box, how to achieve business process agility, agility business impact, sales process automation via enterprise solutions portal, role of consumer buying impact, and what is the impact of such automated bots on operational efficiency, business sustainability, relation between cloud computing and business

		sustainability, how business sustainability can affect operational efficiency.
5	Challenges that can affect achieving such operational efficiency	Challenges that affect operational efficiency, the impact of information security on performance growth, team cohesiveness impact on performance growth, employees impact on performance growth, customer loyalty impact on performance growth, business agility impact on performance growth, business sustainability opportunity to drive performance growth.
6	Search by company names	IBM, Amazon Web Services (AWS), Google, Microsoft, Oracle, Saleforce, SAP.