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How can we build leadership resilience in response to the oil and gas crisis? A question of survival

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LEADERSHIP CRITIQUE & SUPPORTING PORTFOLIO

**A critique to meet the requirements of the Doctor of
Business Leadership at Torrens University Australia
January 2023**

DECLARATION OF ORIGINALITY

I, Oludare Jeremiah, hereby declare that this critique is my work. To the best of my knowledge, my work contains no materials previously written or published by another individual and no materials which have been accepted for the award of any other diploma or degree at Torrens University Australia or any other institution, except where due acknowledgement is made in the thesis. I acknowledge that the copyright of published work contained within this critique resides with those works' copyright holder(s). Any contribution made to the research by others is explicitly acknowledged in the thesis.

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ACKNOWLEDGEMENTS

This Doctor of Business Leadership (DBL) would not have been possible without the encouragement, support, and ongoing belief of several people I hold dear to my heart and will acknowledge herewith.

My first appreciation goes to Almighty God for his enablement and the gift of life given to me to start this program and finish it by His grace alone.

My sincere, heartfelt thanks to my supervisor, Professor Khimji Vaghjiani, who became my supervisor when I enrolled in the DBL 710 program. His excellent support and guidance throughout my study time were remarkable. I am forever grateful for his willingness to help me through this process. He understood my circumstances and guided me, accordingly, sharing his expertise in the subject area. This thesis was only feasible with his sincere advice on every step. His feedback turnaround time on my work was remarkable. I sincerely thank his untiring support to finalise this thesis on time. A very big thank you, sir.

I want to thank the participants who agreed to participate in the interview process, and for their precious time and contribution to this research project, despite their busy schedules.

Special thanks to my wife, Folashade, for her understanding and the tremendous support given to me during my study period, without which I would not have finished my DBL programme. I want to thank my children David, Daniel, Elijah, and John, who supported me in numerous ways during this journey and believed I could complete any task I wanted.

Finally, I am forever grateful to my company, FEDDO GROUP, and all my colleagues who supported me. Thank you all for your excellent support and for believing in my strengths.

ETHICS STATEMENT AND CONTRIBUTOR APPROVALS

- The research associated with this critique was conducted following the National Statement on Ethical Conduct in Human Research (2007).
- Each respondent completed the Research Respondent Consent Form to participate in this research which can be supplied upon request. Most respondents consented to provide information for the research with the caveat that no personal identifying information is published. This confidential information will only be supplied to the appointed examiners upon request from the database, which aligns with the consent provided.
- The following Ethics Statement reflects that each survey respondent was:
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 - Informed that it was their right to withdraw their participation in the research at any stage.
 - Assured that any information or personal details gathered during the research are confidential and that neither their name nor any identifying information will be used or published.
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 - Advised that a recording device was to be used whenever necessary, and their permission was obtained prior to this use; and
 - Advised that if they had any concerns or complaints about the research to contact:

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PROFESSIONAL EDITORIAL ASSISTANCE

There was no paid editorial assistance obtained during the conduct of the research. Several volunteers proofread parts of the evolving drafts and helped to modify wording and grammar. ‘Grammarly software proofreading package was also used to produce the examinable work.

REFERENCING STYLE

American Psychological Association (APA) 6th edition referencing has been used in this Critique and supporting portfolio for alignment to business practice within the oil and gas industry.

DEFINITION OF TERMS

Throughout the dissertation study, several key terms are specifically associated with the research questions and the conceptual framework. These terms and definitions are listed below for the readers' reference and review.

Leader Resilience: The capacity of a leader to absorb, adapt, and rebound from disruptive events with added strength and resolve, an absence of dysfunctional behaviour, and minimal loss of momentum.

Resilience: "The process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances" (Masten et al., 1990, p. 426).

Resiliency: "Defined as the process of coping with adversity, change, or opportunity in a manner that results in the identification, fortification, and enrichment of resilient qualities or protective factors" (Richardson, 2002, p. 308).

Leadership Development: Activities and processes that cultivate and build the skills, abilities, and competencies of an individual who is or will be responsible for others as a leader.

Organizational Crisis: A high degree of uncertainty and internal or external threats that could be detrimental to the business over a sustained period (Sommer et al., 2016).

Organizational Change: The action of a business, society, or association transitioning from its current state to a more desirable future state.

Organizational Resilience: The ability of an entity, such as a business, society, or association, to respond positively to a series of disruptive events to survive and prosper.

Disruptive Events: Oil and Gas Price Crisis and Covid-19 pandemic crisis

PCLP: Personal Contingent Leadership Paradigm

VUCA: Volatility, Uncertainty, Complexity, and Ambiguity

ABSTRACT

A disruption in the organization can present itself in many forms, and it can be internal or external, controlled, or uncontrolled, expected or a surprise. Throughout the literature, resilience manifests from trauma, adversity, or crisis. As for business, within the ever-changing environment that most organizations operate, to survive and thrive in this VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) environment, leaders must be able to manage all these manifestations that arise both inside and outside of the organization? This dissertation study sought to understand how to build leadership resilience in response to the oil and gas industry crisis—a question of survival- focusing on identifying behaviours and characteristics of resilient leaders. The qualitative study took place within Oil and Gas Industry.

The study examined whether and how resiliency can be identified at the executive level of leadership in the Oil and Gas Industry to understand the unique, diverse, or similar perspectives of those individuals responsible for other people at the executive level of leadership during all the two disruptive events. —when managing during times of disruption, crisis, and day-to-day functions. The study also examined the possible ways to build business resilience in the short term in response to the pandemic, use the emergency response as an opportunity to create stability in the long term, and the importance of digital technologies to optimize the organization resilience. Five key findings emerged from the research. Finding 1: Behaviours and characteristics of leader resilience are identifiable and are a combination of professional and personal skills, practices, and experiences. Finding 2: The consistent business practices and corporate culture embedded in the oil and gas industry significantly impact resilience development. Finding 3: Resilience in leadership plays an essential role in steering the organization during the oil and gas price crisis and the covid-19 Pandemic. Finding 4: Developing Leadership Skills before an organizational crisis or change event will better prepare it to bounce back with strength and resolve while suffering limited dysfunction or loss of momentum. Finding 5: Adoption of digital technologies readiness in the oil and gas industry significantly impact resilience development.

In conclusion, this critique expands on the research with the development of a Proposed Personal Contingent Leadership Paradigm understanding my current capabilities and the Proposed Personal Contingent Leadership Paradigm that the research findings have led to and will then explore the leading digital technologies and how they are transforming the oil and gas industry.

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CHAPTER 1: INTRODUCTION

Resilience takes several forms and reveals itself in different ways. At the 2018 Davos World Economic Forum, Trudeau stated that the pace of change is never faster in a unique that has never been seen before, and he further stated that the pace would never be this slow again” (Trudeau, 2018, p. 1). Business today has as much disruption, change, and uncertainty as at any time in history. To survive and thrive in this VUCA environment, the organization must manage all these manifestations that arise inside and outside the organization (Duchek, 2019). Leaders who lead those organizations will require high degrees of resiliency in the face of organizational change and disruption to ensure the company’s long-term sustainability and success (King et al., 2015).

Business disruption can present itself in many forms—internal or external, controlled or uncontrolled, expected or a surprise. For example, the choice for a company to relocate its corporate headquarters to a new state is an internal, controlled event. In contrast, an economic recession or a global health pandemic is an external, uncontrolled event.

Organizations should be able to respond to different forms of future disruptions and crises when operating in volatile, uncertain, complex, and ambiguous (VUCA) environments. Unexpected organizational events are described as rare in various kinds of literature events (Marcus & Nichols, 1999; Lampel et al., 2009; Starbuck, 2009), surprises (Lampel & Shapira, 2001; Bechky & Okhuysen, 2011), catastrophes (Weick & Roberts, 1993; Majchrzak et al., 2007), or crises (Weick, 1988; Pearson & Clair, 1998; Rerup, 2009).

The ability for both a business and a leader to thrive requires resilience, and building resiliency is essential for the personal and professional success of business leaders who are faced with internal and external organizational crises and disruptions. A resilient leadership team must be built first to build a resilient organization that will respond to changes and disruptions. To successfully build a resilient organization, one must start with the individuals who will lead the organization in the future (Kuntz et al., 2016).

This dissertation hypothesized that building business leadership develops resilience in the short term in response to the pandemic, using the emergency response as an opportunity to create resilience leadership in the long term, and using Artificial Intelligence to optimize the organization. The real success of any organization is its people, especially those who lead the company through both prosperous and challenging times. Equipping and developing future leaders with resiliency to manage future challenges and disruptions in business is essential.

The focus of this dissertation is to identify and examine the behaviours and characteristics of resilience in current leaders who work at Oil and Gas Industry and led teams through the Oil and Gas Crisis and the current COVID-19 pandemic crisis; the study examined the adoption of resilience in the author PCLP during disruption and crisis and whether those behaviours and characteristics could be developed before an organizational crisis or change event, will better prepare to bounce back with strength and resolve while suffering limited dysfunction or loss of momentum. This study defines *resilience* as the capacity of a leader to absorb, adapt, and rebound from disruptive events with added strength and resolve, an absence of dysfunctional behaviour, and minimal loss of momentum.

1.1 Overview of my leadership Journey in the Oil and Gas Industry

I am a registered engineer with more than 20 years of valuable experience in the energy industry with a solid technical background in consultancy and design. I have extensive international leadership experience in the major offshore oil and gas regions, with a particular emphasis on Australia Pacific, Middle East, North Sea, South East Asia and West Africa region, and have attended many leadership and management courses globally which include but not limited to International Business from University of New Mexico, USA; International Leadership and Organizational Behaviour from Università Bocconi, Italy and Leadership in 21st Century Organizations from Copenhagen Business School, Denmark. This experience and education help to build leadership skills and improve leadership attributes to be more effective in the ever-changing, complex business world.

According to McCain (2022), the oil and gas industry is a massive player in the world's economy. Although it is often controversial, it no denies its impact on our daily lives (and wallets). Here are some statistics about the oil and gas industry:

- In 2020, the world produced **4.165 billion tonnes** (metric tons) of oil.
- The global demand for crude oil is **96.5 million barrels per day**.
- Worldwide oil consumption **decreased by 9.1%** from 2019 to 2020.
- The annual revenue of the global oil and gas exploration and production industry is **\$5 trillion**.

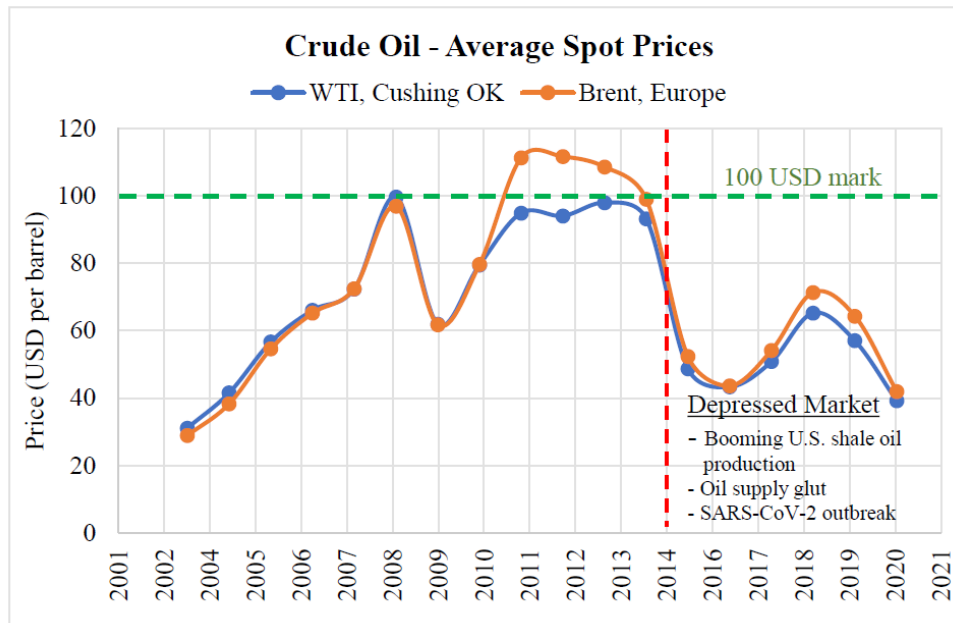


Figure 1-1 Historical annual WTI and Brent benchmark spot prices, Source

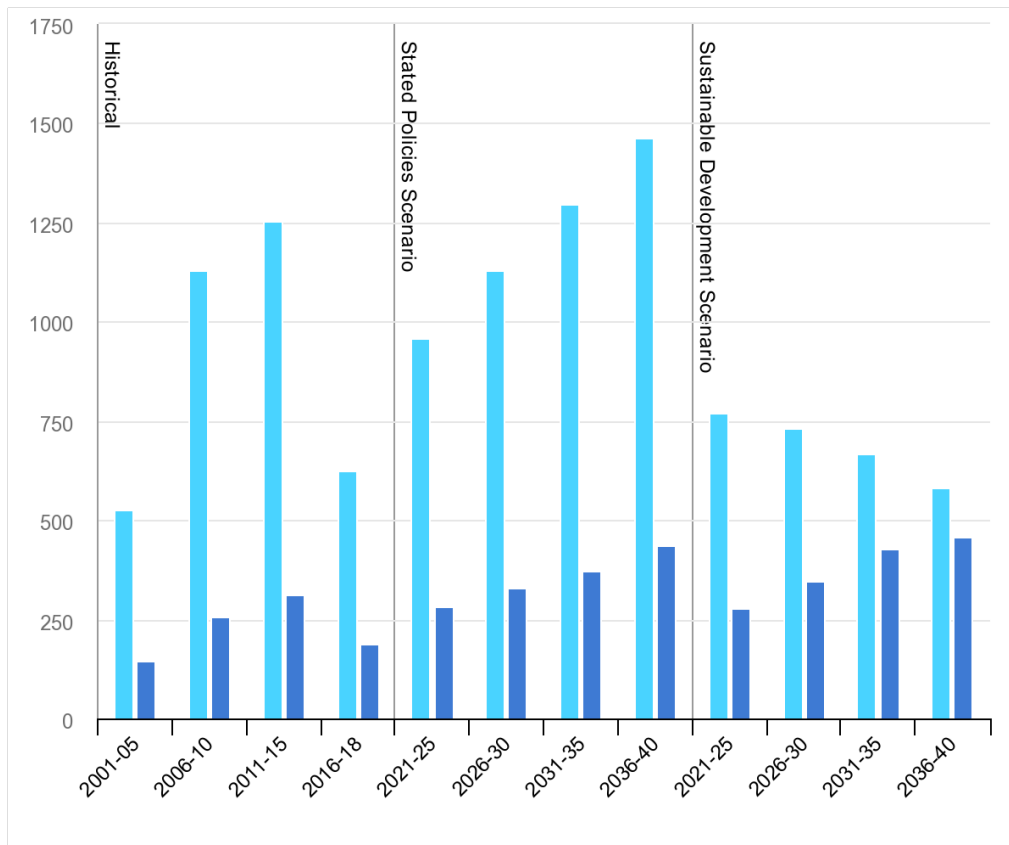


Fig 1-2 Average annual net oil and gas income before tax of NOCs and INOCs by scenario, 2001-2040

I am the Chief Executive Officer of FEDDO GROUP, a global oil and gas engineering company and the Global Leader in Subsea and Pipelines System.

My leadership style is transformational Theory and Role modelling, part of transactional leadership theory. My leadership goal is to transform people and organizations to change their minds by enlarging their vision, insight, and comprehension to clarify purposes; make behaviour congruent with values; and bring about changes that are enduring, self-perpetuating, and momentum building" – Bolden, et al. (2003).

My career started as a design engineer (individual contributor) within working teams in the oil and gas industry over twenty years ago. I commenced my first role with accountabilities and scope of authority in 2005, typically called 'leadership roles. My roles have grown in responsibility and accountability as I moved between different positions and continents. The timing of these moves, employer and team size has been summarised in Table 1, Leadership History, as a tangible measure of the changes over time.

Role	Employer	Team Size	Duration	Term	Location
Chief Executive Officer	FEDDO GROUP	80		Nov 2016 - Date	Global
Project Engineering Manager	National Petroleum Construction Company (NPCC),	25	2 Years	Nov 2014 – Nov 2016	Abu Dhabi UAE
Operations/Project Manager	FEDDO Pty Ltd	15	1 Year 3 Months	Aug 2013 – Nov 2014	Perth Australia
Principal Subsea Pipeline Engineer	Genesis Oil and Gas Consultants	10	1 Year 1 Month	July 2012- July 2013	Perth WA, Australia
Senior Engineering Specialist	INTECSEA Pty Ltd	6	3 Years 10 Months	Aug 2008- June 2012	Perth WA, Australia
Lead Subsea Pipeline	Subsea 7	10	1 Year	Aug 2007- July 2008	Lagos, Nigeria

Senior Pipeline Engineer	WorleyParsons Nigeria	6	1 Year	2006-2007	Lagos, Nigeria
Lead Flowline/Corrosion Engineer	National Engineering & Technical Company Ltd	4	1 Year	2005-2006	Lagos, Nigeria

Table 1-1: My Leadership History

An overview of my experience in these roles is abridged in chronological order as follows:

- **Discipline Team Leader, 2005 – 2012:** Supervised hourly wages workforce in the tactical achievement of tasks ranging from daily to six-month scope with a high degree of technical competence. This was genuinely leading by example on a technical level as I utilized my Subsea and Pipeline systems expertise to engage the workforce and actively solve problems encountered.
- **Project Team Leader, 2012 – 2016:** This grouping of roles had three to seven direct reports that, in turn, supervised the frontline workforce, which allowed me to become less tactical and focus on more strategic work to support and establish the business requirements to be successful. This work had a three-month to two-year scope for planning and delivering desired results to the business.
- **Senior Executive Leader, 2016 – Present:** This grouping of roles has transitioned me to be a leader of leaders with Profit & Loss (P&L) responsibility for the global entity and direct accountability for achieving our one to five-year global business plans. I have transitioned from requiring a high degree of technical understanding and capability to leadership roles and less of an administrator of processes, as outlined in the prior two groupings.

Commencing my career in a 'hands-on' role also started the development of my technical competence where, over the first four years, I established my strong technical background in the consultancy and design of complex subsea systems comprising pipelines, flowlines, and associated structures, spools, and hardware including Artic, Deepwater and High Pressure/High-Temperature Pipeline system. As I transitioned into roles that provided me with Discipline Team Lead experience, my technical knowledge increased, and I also had the opportunity to lead a small team of 4-10 engineers. Reflecting on this experience with my understanding of leadership has shown it provided me with unique resilient skills and the

ability to adapt quickly to evolving situations. However, only some of these skills are favourable due to their reactive nature.

Over the last six years, I have had a Senior Executive Leader role introducing new technologies and services into the oil and gas industry, working as the Chief Executive Officer of FEDDO GROUP in addition to being the Global Leader of Subsea and Pipelines System and my role to oversee global daily business activities, improve overall business functions, train heads of departments, manage budgets, developing strategic plans, creating policies, and communicate business goals. In many cases, I was working through challenges with my team that the industry had never previously encountered. As I have continued to research leadership material, it has become apparent that over the last two years, while undertaking the first four modules of the DBL, most organizational issues I have faced as a leader were multi-dimensional. This made me see the resiliency leadership approach being deployed.

I had the desire to employ resilience leadership well before I was given roles of authority in my working career that were exhibited in my actions and behaviours dating back to when I was in the university for my first degree, taking on challenging issues with little or no authority. This initial yearning was nurtured through playing team sports, where we were regularly faced with common issues that we had to work through to win the game. Thinking through the next series of actions, communicating ideas and inspiring others on the team to act spurred a deep-seated craving to continue my leadership journey. Although I sought roles of authority, such as the social club president, to fulfil this need, I realized this delivered hierarchy. I did not foster my desire to be a leader by inspiring others to act on the challenges we faced. I will further expand on the definitions and relationship of leadership and resiliency in Chapter 2 (Leadership Theory Review).

Throughout my career, I have filled this need by changing roles regularly to take on more progressive and challenging situations in my career and personal life that have allowed my capabilities to grow through practical experience. The thirst to accomplish what others can only imagine has resulted in a duty to help others succeed personally while gaining my fulfilment from seeing others grow through these experiences and positively contributing to the community. Establishing a family has also challenged my capabilities; I regularly contemplate the legacy I leave because of my actions and behaviours, which is subsequently embedded in this body of work.

Fulfilment of my work comes from more than just the content or achievement of milestones. It also comes from the opportunity these tasks provide to develop and aid others in growing as part of their journey in life. A conclusion that Clayton Christensen (2010) drew from his work embodies my values and has stuck with me over the last few years. In his concise summary, he states,

"Management is the noblest of professions if it has practised well. No other job occupation has as many ways to assist others in learning and growing, take responsibility and be identified for achievement, and contribute to a team's success".

The term 'management' is aligned with the roles represented in the workplace. However, I see this as where leadership comes into 'practising well in the profession' and the foundation for leaving a positive legacy through experiential learning with others.

1.2 Focus of Dissertation

Contemporary research suggests that to develop organizational resilience, companies must invest in the resilience of their leaders. Resilience development should not be crisis-dependent; instead, it should be an investment now, so the leader is prepared for the crisis (Kuntz et al., 2016).

A leader must be prepared to build a resilient organization and withstand the uncertainty of the economy, technology, internal/external threats, geopolitical disruptions, and widespread pandemic crisis (Ravitch, 2020).

The main objective of the critique is to build business resilience in the short term in response to the pandemic, use the emergency response as an opportunity to create solution resilience in the long term, and use emerging technology to optimize the organization.

The literature review will comprise findings in the research related to resilience and leadership development and the relationship between the two, examine resilience as it relates to its importance in leadership development for the researcher profession and examine Resilient Leadership and its Relationship to Transformational-Transactional Leadership Theory. The review will also investigate resilience within the researcher PCLP, and the relationship resiliency has with the Oil and Gas industry. It creates a hypothesis for using technology to optimize the oil and gas industry through resilient leadership.

The initial dissertation research was to understand ways that executive leaders in the Oil and Gas industry may or may not have demonstrated resilience during two disruptive events: one

internal event that was in the industry's control (The oil and Gas Price Crisis) and one external event that was out of the industry's control (COVID-19 pandemic Crisis).

The research questions were designed with these two events in mind. The research sought to understand from the perspectives of executives at Oil and Gas industry the following information:

1. How do leaders demonstrate resiliency in the Oil and Gas Industry at the executive level?
 - a. In day-to-day functions?
 - b. During Oil and Gas Price Crisis and Covid-19 pandemic crisis events?
 - c. How has this changed over time?
2. What are the specific behaviours and characteristics of resilient leaders at Oil and Gas Industry at the executive level of leadership?
 - a. In day-to-day functions?
 - b. During Oil and Gas Price Crisis and Covid-19 pandemic crisis events?
 - c. How has this changed over time?
3. How can emerging technology enable resilience in oil/gas leaders to optimize the industry?
4. What influences/shapes different forms of resilience in Oil and Gas Industry leadership?
5. What techniques and learning practices can proactively cultivate resilience in the future of the Oil and Gas Industry's leaders at the executive level of leadership before an organizational crisis or disruptive event occurs?
6. How can leaders move faster towards digital transformation in terms of digital investments and potentially rethink the technical architecture and the ability to utilise an extended network of digital solutions that may provide a more resilient infrastructure?

1.3 Problem Statement

The oil and gas price crisis of 2015 to 2017 was an internal disruption within oil and gas's control and had a tremendous negative effect on the industry. The industry took specific measures to navigate and recover from the crisis. One of the industry's significant challenges is to stay competitive when producing refined crude oil and products at a lower cost.

Optimizing production systems that include environmental utilities on currently operating

sites is a priority for the oil industry. This maximizes production efficiency, reduces extraction and refining costs, and offsets exploration costs (Mayor, 2021).

Leaders in the oil and gas sector are being forced to consider new ways to adapt to the needs and safety of their people, adjust business operations and models, and satisfy evolving customer requests so that they can finally return to stability and, eventually, growth. In the short term, they must determine what immediate actions need to survive this turbulent period (Mayor, 2021).

Several companies faced spending cuts, hiring freezes, or dividend reductions, and some have started paring down staff. Low prices, commoditization, and declining exploration – exploration for new resources dropped globally, affecting the energy sector's ability to meet future demand.

The COVID-19 pandemic is the other disruptive event. The rapid and unprecedented spread of COVID-19 eclipsed other epidemics in size and scope. In addition to disrupting millions of lives, the economic damage is significant and far-reaching. This situation posed an enormous challenge for leaders worldwide; despite the shock's global nature, the pandemic's impact has varied significantly across firms, including the Oil and gas Industry.

The COVID-19 pandemic and the measures adopted to mitigate the virus's spread dramatically changed the conditions in which businesses operated. Firms experienced simultaneous supply and demand shocks. Businesses faced the closure of operations, bottlenecks in inputs, and reduced mobility for their workers worldwide. Consumers' flexibility was also restricted, and demand for most organizations was impacted negatively through various channels, including unpredictability and household income losses.

This uncertainty embedded in this situation makes the 'leadership challenge' even more complex. Today, executives face uncountable leadership dilemmas and conflicting demands, and many still need a simple answer. Considering opposing perspectives is vital, especially when both perspectives seem logical. It is almost like a game that cannot be won.

Therefore, the qualitative research examined how leaders identify the specific behaviours and characteristics of resilient leaders at the executive level of leadership in day-to-day functions during the Oil and Gas Price Crisis and Covid-19 pandemic crisis events and how this has changed for the participant over time. The intention of conducting inductive qualitative research was to understand what influences and shapes different forms of resilience in Oil

and Gas Industry leaders and what techniques and learning practices can proactively cultivate resilience in the future of leaders prior to an organizational crisis or disruptive event in the future.

CHAPTER 2: LITERATURE REVIEW

The theoretical framework outlines the literature review in the following order. This review will start with a brief introduction to leadership to elaborate on the evolution of Leadership Theories. This will explore the insight into the journey that 'leadership' has travelled through the minds of researchers from time immemorial. It throws light upon the historical evolution of leadership theory, reflects upon definitions and theories, and questions the inability to not have one obvious meaning side of this ever-evolving concept. This presents the history of dominant leadership theories and research, starting with the Great man theory and Trait theory, Behaviourist Theories, situational Leadership, and Contingency Theory, to Transactional and Transformational leadership styles. Most importantly, the author sheds light on each theory's drivers, solutions, and limitations, then draws personal conclusions and justifications supporting conclusions drawn regarding the stages and drivers of leadership theory evolution.

I also examine various supporting insights and characteristics of leadership, such as vision, diversity, and personal characteristics of an individual leader.

The literature review examines resiliency development, followed by a review to examine the characteristics of resilience and its relationship to emotional intelligence, followed by a review of the literature on resiliency and managing change, organizational change, and crisis. The literature review examines resilient leadership and its relationship to transformational-transactional leadership theory. The literature review concludes by examining the current gaps specific to research in the field.

Finally, the literature review on resilience and leadership considerations from the Oil and Gas Corporate Environment will also look at the dynamic of the global nature of the business, the highly specialized profile of the workforce, and the cycles derived from the price fluctuations.

2.1 Introduction

Leadership can be defined in many ways and is represented differently by everyone.

However, the search for a generic definition of leadership is unlikely to be found and will continue to change and evolve depending on personal or global situations. For instance, the oil and gas price crisis, pre-COVID-19, COVID-19, and post-COVID-19 situations may present different Leadership styles for different situations. There are almost as many diverse

definitions of leadership as people who have tried to define the theory (Stogdill, 1974, p. 259).

Northouse (2010, p. 3) defines leadership as a process by which an individual influences other toward attaining group or organizational goals. Based on this context, this paper shows three different types of definitions of leadership. Firstly, leadership is a social influence process (Kevin, 2013): leadership does not exist without a leader and followers. Secondly, leadership draws out voluntary action on the part of followers, this voluntary disposition of the act of conforming separates leadership from management. Finally, leadership results in followers' behaviour that is purposeful in an organized setting (Uhl-Bien & Pillai, 2007, p. 196).

2.2 Leadership Theory Literature Review

A review of relevant literature shows that scholars have attempted to find universal constructs that might be applied and generalisable across contexts. However, the presence of cultural boundaries and the practicality of collecting data across national boundaries have limited the number of cultures a scholar can effectively study. Therefore, the findings from such limited cultural contextual studies might not provide conclusions that could be generalized more broadly.

The emergence of leadership theories starts with the great man theory and trait theory, behaviourist theories and situational leadership, contingency theory, and transactional and transformational leadership styles. In this light, each leadership theory has strengths and weaknesses. Their strengths and weakness depending upon the situation, which drives the concerned leader to adopt the most befitting leadership traits (Khan & Nawaz, 2016, p. 21).

The taxonomy presented in Table 2-1 represents leadership theories extending from the Great Man Theory to the Transformational Leadership Theory.

Theory	Description/Characteristics	References
The Great Man Theory	Based on the belief that leaders are exceptional people, born with innate qualities, destined to lead.	(Stogdill 1989; Bass 1990)
Trait Theories	A leaders' innate traits are interlinked with his / her acquired knowledge.	(CEML 2002; Harter 2008)

Behaviorist Theories	The actions of the leader (gestures and attitudes) transform follower attitudes	(Langton & Robbins 2007; Zakeer 2016)
Situational Leadership	The leadership approach is adapted according to the situational context. It proposes that there may be differences in required leadership styles at different levels in the same organisation	(Langton & Robbins 2007; Shin, Heath & Lee 2011)
Contingency Theory	Leadership is focused on identifying the situational variables which best predict the most appropriate or effective leadership style to the contingent environment.	(Price 2003; Charry 2012; Lamb 2013)
Transactional Theory	This approach emphasises the importance of the relationship between leader and followers, focusing on the mutual benefits derived from a form of 'contract' through which the leader delivers such things as rewards and penalties.	(Charry 2012; Lamb 2013)
Transformative Theory	Self-transcendent values pursued through a vision & shared goals for common good.	(Charry 2012; Lamb 2013)

Table 2-1. Classification of Significant Leadership Theories

Van Seters & Field (1990) aggregated the leadership theories to a detailed level asserting that there were ten eras over time in which periods existed where several theories were at play. As the understanding of the current era became inadequate, it transitioned to the next.

This work is represented in Table 2-2: Evolutionary Tree of Leadership Theory, where the progression through the eras becomes apparent when applied to the framework of Behaviour, Personality, Influence, and Situation with the evolutionary development approach.

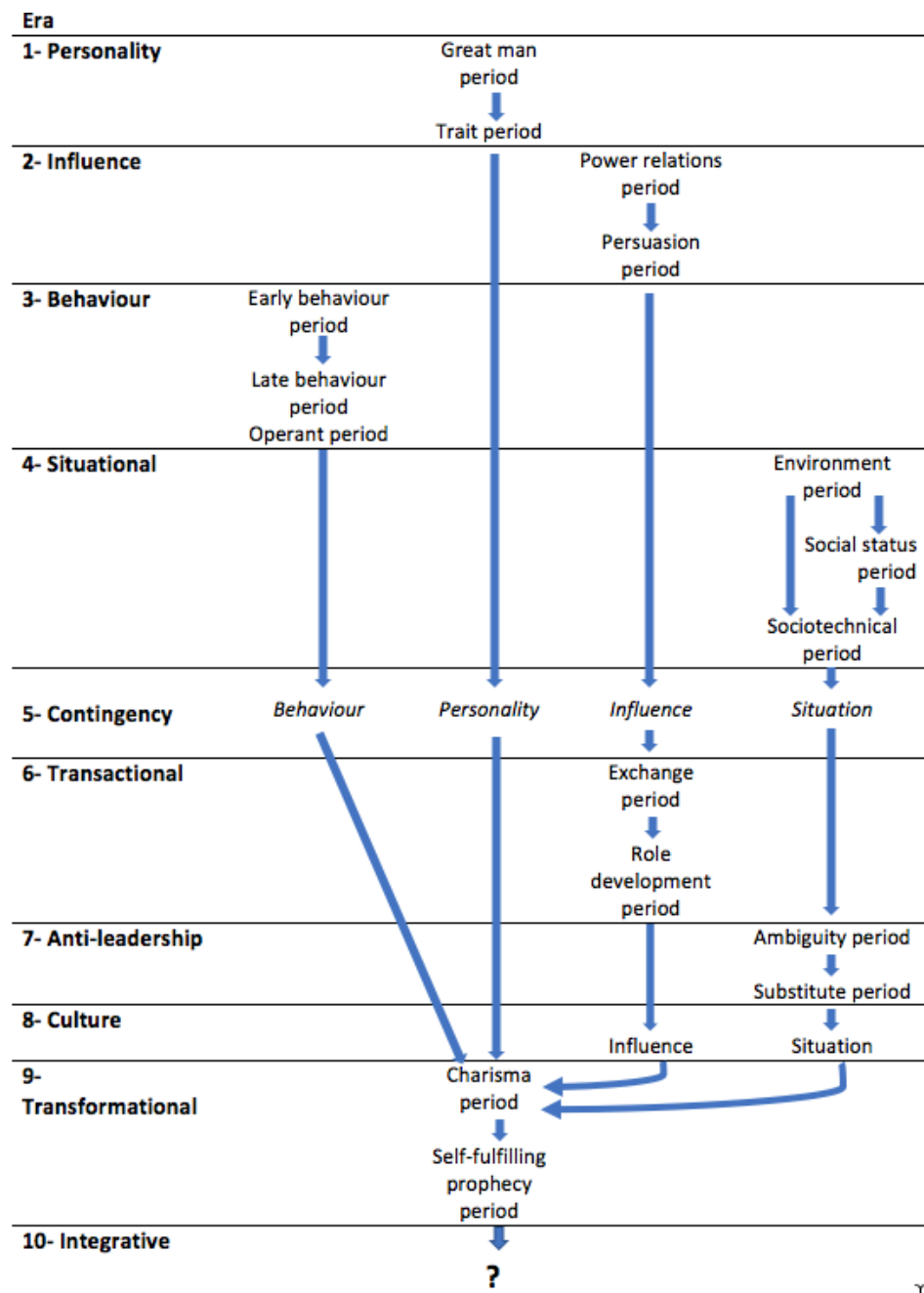


Table 2-2: Evolutionary Tree of Leadership Theory

Adapted from (Van Seters & Field, 1990, p. 33)

Van Seters & Field (1990) hypothesised at the time that the tenth era would be Integrative, with the addition of the different variables of complex technologies, fast-paced change, multiple decision arenas, widely dispersed players, multicultural context and extensive political activities. There are several differing views on the current leadership theory and whether these are genuinely a theory or taxonomy of a trend that has emerged. The common

thread is that; traditional, hierarchical views of leadership are less and less valuable, given the complexities of the modern technology-enabled world (Lichtenstein et al., 2006, p. 2).

The synopsis of Van Seters & Field's work was that for leadership theory to continue to evolve and provide practical applications for managers, researchers must recognise that leadership:

1. It is a complex, interactive process with behavioural, relational, and situational elements.
2. It is found not solely in the leaders but at the individual, dyadic, group and organisational levels.
3. It is promoted upwards from the lower organisation levels as much as it is promoted downwards from, the higher levels.
4. It occurs internally, within the leader-subordinate interactions and externally, in the situational environment.
5. Motivates people intrinsically by improving expectations, not just extrinsically, by improving rewards systems.

Complexity leadership theory follows these five points and saw the coupling of complexity theory and leadership theory as researchers sought to understand how technology impacted leadership. Succinctly stated, this was a shift where organisations transitioned from optimising individuals' human capital to understanding and strategically planning the social capital through the connectivity of individuals and ideas (Arena & Uhl-Bien, 2016, pp. 22-23). With the addition of a complex adaptive systems perspective, a new style of leadership theory and study by understanding leadership in terms of a developing event rather than a person was established (Lichtenstein et al., 2006, pp. 3-4).

The uptake of connected technologies and continued consolidation in the business sector since the turn of the century resulted in the emergence of Distributed Leadership theory. This transition in a large, widespread organisation with the need for de-centralisation of decision-making, physical locations and the growing size of organisations necessitated a need to reduce hierarchical layers. The contribution of distributed leadership is not in offering a replacement for other theories but in enabling the recognition of various forms of leadership in a more integrated and systemic manner across an organisation (Bolden R., 2011, p. 253). Leadership is exhibited across the organisation, but not solely by those in management or senior roles top-down and is displayed at all levels through leadership practice, depending on the organisation's maturity. Since the turn of the century, leadership has reached an inflection

point becoming focused on aligning efforts rather than managing personnel. The growing interdependence of organisations has removed the autonomy of individuals, wherein a matrix organisation of their work, interaction and deliverables are tied to many others within the organisation via technology (Kotter J. P., *What Leaders Do*, 1990, p. 105). In these times of rapid change and environmental complexity that have been Leadership has become more critical than ever (Van Seters & Field, 1990, p. 29).

The following sections will be inclusive insight concerning the theories of leadership that appeared from time to time in diverse situations and circumstances.

2.2.1 The Great Man Theory

This is one of the early theories on leadership, which is primarily focused on historical personalities and what made them strong leaders, with an attempt to equate leadership with personality (Rajan, 2009, p.25). Great Man theory contends that leadership traits are inherited. Fascination with great men of history effectively reduced the role of mere mortals to extras' (Grint, 2011, p. 8). Carlyle (1888) stated that some people are born great, and others become great. This reinstated the belief that leaders are born with innate qualities and are destined to lead. According to these theorists, Moses was one of the examples of the Great Theory that delivered the Jews from Egypt (Bass & Bass, 2009, p. 49). This theory has its limitation because it fails to explore the role of leadership in ensuring business and organizational coherence (Grint, 2011). This theory is also a gender bias, as is seen in its name, the Great Man theory, which states that leadership is irredeemably masculine, and the Great Man is indeed a man (Grint, 2011, p. 8).

This demonstrates that good leaders were born or inherited until recently but refused to address a different kind of situation. The exclusion of women in these studies was due to the small number of women in that era that occupied leadership positions (Harrison, 2018, p. 18). There are now more women in seats of power and are focal points in many businesses, for example, Queen Elizabeth, and this clearly shows that women are equally effective leaders (Kolb, 1999, pp.306).

2.2.2 Trait Theories

Trait theories identify traits that differentiate leaders from non-leaders (Bass, 1990, p. 103). The Great Man theory, which attributed innate qualities to particular people, resulted in research into leadership that focused on the leader's personality characteristics (Wright, 1996). The trait theory presents that individuals have a particular attribute that motivates

them to rise and assume the role of leadership. The problem with this theory is that the trait theories often needed help accommodating leader-subordinate interactions and were disconnected from situational conditions. It ignores the situational and environmental factors (Horner, 1997, pp. 270-272). The traits possessed must be relevant to the situation in which a leader finds him or herself, which means a successful leader in a particular situation might not be effective in another; this trait approach does not effectively justify the role of leadership in entrepreneurial settings (Harrison, 2018, pp. 19-20).

This acknowledges the trait theory of the way it points to some traits that are very useful to be a successful leader, which are a drive, desire to lead, integrity, self-confidence, intelligence, and subject matter expert (Bolden et al., 2003, p.6; Harrison, 2018, p. 19). Trait theory does not address whether these leadership qualities are inherent to an individual or whether they can be developed through training and education (Kanodia & Sacher, 2016, p. 150).

2.2.3 Behaviorist Theories

Harrison (2018, p. 23) continues that the inconsistencies in the evidence for the trait theory drive the researchers to pay attention to what leaders do rather than what qualities they possess, which is about their behaviour. It is the most crucial theory that has the attention of practicing Managers (Bolden et al., 2003, p.6). Styles of leadership are categorized based on Leader's behaviour. Michigan study and the Ohio state studies are the two major studies on behavioural aspects of leadership that highlighted leader emphasis on the accomplishment of tasks and leader concern for individual and group cohesion (Rajan, 2009, p.26). The behavioural theory focuses on how leaders behave toward their subordinates in various circumstances (Northouse, 2010). Michigan study and the Ohio state studies grouped leaders into five leadership styles: authority compliance, country club management, poor management, middle-of-the-road management, and team management (Northouse, 2010). Behavioural theories have its shortcoming; firstly, they fail to consider the situational contingencies associated with leadership; secondly, the behavioural theory is limited based on theory building and orientation; and thirdly, it is plagued by inconsistencies in research results, and researchers have not been able to prove precisely how leadership styles are associated with performance outcomes (House & Aditya, 1997, pp. 462-465; Yukl, 1999, pp. 42-25).

This theory evaluates past behaviour towards subordinates but fails to address the different situations in the past (Harrison, 2018, p. 25). Through this theory, it was unable to identify

universal behaviours that are required to be an effective leader, though it helps identify some behaviours like team management.

2.2.4 Situational Leadership

The driver for this Situational Leadership theory came as behaviour researchers fail to consider situational influences that may moderate the relationship between leader behaviour and effectiveness (Harrison, 2018, p. 27). This theory proposes leadership styles required at different situations and levels in the same organization (Bolden et al., 2003, p.6). Situational highlights the importance of relative possession of power, external environment, nature of the task, and social status (Bass, 1985). Situational factors are an organization, the nature of the external environment, the characteristics of subordinates, and the nature of work. The environment theories gave insight into how leaders emerge in the right place at the right time to take the lead (Rajan, 2009, pp. 26-27). The social-status theories reinforce the expectation that everyone will continue to act congruently with previous behaviour for a specific task. The leader's and subordinate's roles are explained by a mutual expectation of their behaviour, while the socio-technical theory combines the environment and social status theory (Rajan, 2009, pp. 26-27). Situational leadership has consistency problems (Blanchard et al., 1985), for example, when followers are unable but willing to do a task.

This shows that the application of the prescriptions of situational leadership at work, indicates conflicting guidelines for the same situation, for example, using competence and high commitment to unable but willing, though the latter is less efficient than the former, this concludes multiple versions of situation leadership (Graeff, 1997, pp. 9-12).

2.2.5 Contingency Theory

This refinement of a situational leadership theory; focuses on identifying the situational variables that best predict the most appropriate or effective leadership style to fit the circumstances (Bolden et al., 2003, p.6). This theory views how effective leadership is contingent on one or more factors of behaviour, situation, influence, and personality (Harrison, 2018, pp. 27-28). The theory was made in the form of the Fiedler model (Fiedler, 1964), Path-goal theory (Bass, 1985), and Normative Theory (Vroom & Yetton, 1973). Contingency theories have their limitation; it did not explain clearly why employees follow, nor do they offer prescriptions on suggested behaviours for different situations.

This theory distinguishes three groups of activities as per Action Centred Leadership: Building and maintaining the Team, Achieving the Task, and Developing the Individual,

which are highly interrelated (Rajan, 2009, p.27). This shows that the contingency leadership theory confirms that the success or failure of an organization in achieving the goal relates to the leadership style; the choice is to determine the most suitable leadership style that fits a specific situation (Gelmar, Reyner, Alexander & Rodobaldo, 2017, p. 8). In broad terms, Contingency theories differ from and build on the trait and behaviour theories, choosing the best way to lead in this ever-changing and complex world, thereby considering the situation when assessing leadership behaviour to be deployed (Harrison, 2018, p. 29).

2.2.6 Transactional Theory

Transactional leadership theory, also called exchange leadership theory, is a transaction between the followers and the leader (Khan & Nawaz, 2016, p. 25). This theory believes in the sharing and highly valued relationship between the followers and leader (Bass, 1998, pp. 185-190). It focuses on the mutual benefits that come from a form of 'contract' through which the leader gives rewards or recognition in return for the commitment or loyalty of the followers (Graen & Cashman, 1975). This theory changes the focus from quantity enhancement to quality enhancement. The nature of the transactional relationship is shaped by the leadership role in goal adjustment, motivation, and leadership styles, and followers' ability, similarity, proximity, and complementarity. Effective leadership occurs when there is an equitable exchange between leaders and followers based on mutual respect and trust. Leaders also maximize the extent to which individual and collective goals are compatible (Berger, 2014, p.7).

This concludes that the role model style of leadership depends on the quality of the relationships between the leaders and followers over time (Bolden et al., 2003, p. 15). This shows that the relationships with followers, one-on-one or with groups, are dynamic and not static; the relationship can change over time and vary from issue to issue (Khan & Nawaz, 2016, p. 25). The nature and quality of relationships are necessary to lead effectively in the ever-changing complexity of the business environment (Bolden et al., 2003, p. 15). Though this theory is a traditional model of leadership that takes its root from an organization or business perspective at the bottom (Bolden et al., 2003, p.15).

2.2.7 Transformational Theory

Transformational leadership is a leadership style known for creating a clear picture or vision for what the team should accomplish. Transformational leaders encourage their employees to

think differently and approach their work from new angles; they provide an encouraging, supportive environment for exploration and empowerment (Ingleton, 2013; Ingram & Cangemi, 2012; Kanaste, Kyngas, & Nikkila, 2007; Malloch, 2014; Schmitt, Den Hartog, & Belschak, 2016; Tonkin, 2013).

The leadership style envisions and implements the transformation of organizational performance (Bolden et al., 2003, pp. 15-16). A leader's primary role is to create positive expectations (Bass, 1985). This approach identifies a leader as one who energizes people to action, develops followers into leaders, and transforms organizational members into agents of change (Bennis & Nanus, 1985). Transactional leadership is conservative, while transformational leadership is revolutionary. Transformational leaders are charismatic, inspirational, intellectually stimulating, visionary, and considerate of individual needs. They influence followers to find creative solutions to challenges and delegate, coach, advise, and provide feedback (Bass, 1994).

The transformational leadership approach offers the most effective ways to minimize problems and positively transform an organization (Bolden et al., 2003, p.16). This transforms people, and the organization changes the staff's minds and hearts and enlarges the vision. The development of followers will eventually optimize the development of our organization as well because high-performing associates will build high-performing organizations (Bolden et al., 2003, p.16).

"The objective of transformational leadership is to 'transform' people and organizations is to change them in mind and heart to clarify purposes; enlarge vision, insight, and understanding; make behaviour congruent with principles, beliefs or values; and bring about changes that are momentum building, self-perpetuating, and permanent" (Bolden et al., 2003).

According to Bass and Avolio (1994), five transformational styles are closely aligned with my current leadership styles.

- **Intellectual Stimulation** –To challenge the status quo and encourage subordinates' creativity. Encourage followers to explore new ways of doing things and new learning opportunities.
- **Individualized Consideration** – Offer support and encouragement to individual followers. To keep lines of communication open so that followers feel free to share

ideas to foster supportive relationships and offer direct recognition of each follower's unique contributions.

- **Inspirational Motivation** –Have a clear vision and the ability to articulate to followers. They support followers to experience the passion and motivation to fulfill goals as leaders.
- **Idealized Influence** – Serve as a role model for followers. Followers trust and respect their leader, emulate the leader, and internalize ideals.
- **Idealized Behaviours** –Living the ideas and encouraging trust among followers.

Transformational leadership focuses on encouraging communication and teamwork to solve problems. For example, transformational leaders advocate cooperation among team members by establishing a shared attitude, cultivating a helping climate, and asking team members to be "team players" (Jiang & Chen, 2018). Since its inception in the 1970s, the concept of transformational leadership has been widely researched from different perspectives by researchers in public and private sectors (Bass, 1988; Covey, 2006; Northouse, 2003; Ballou, 2012). Many studies examining leadership styles have concluded a strong relationship between transformational leadership and employee job satisfaction, and these two variables are correlated positively (Medley & Larochelle, 1995).

They further emphasize that transformational leadership plays a crucial role in fostering and stimulating information exchanges leading to delighted employees, which contributes to accomplishing the organization's goals (Lim & Ployhart, 2004; Ash, 1997; Marn, 2012). Northouse (2003, p84) states that the "transformational leadership approach provides a broader perspective that augments other leadership models". Northouse (ibid) further argues that while other leadership styles emphasize the exchange of rewards for achieved goals, the transformational experience incorporates not only the sharing of rewards but also the leader's attention to the needs and growth of the followers. (Bass & Avolio 1994; Felfe & Schyns 2004). Through intellectual stimulation, transformational leaders perpetually re-examine their assumptions. They stimulate ways of addressing problems and encourage individuals in self-managed project teams to take the initiative and constantly invent improvements (Bass et.al., 2004; Elkins & Keller, 2013; Sundi, 2013). The construct of Individual Consideration (IC) is also reflected in the individualization of employment contracts to meet an individual's unique needs and preferences. Transformational leaders with this dimension can develop each

follower's demands (Luthans & Doh, 2012). Bass (2004, p28) describes it as "the degree of personal attention and encouragement of self-development that a leader devotes to the employees". Yuki (2010) suggests that transformational leaders also address the broader issues of environment, business ethics and gender, reflected in a new emphasis on corporate core values. Building an organizational culture and shaping its evolution are the essential functions unique to leadership. It has been argued that transformational leaders lead in directing responses to change by establishing an initial vision, influencing the adoption of new directions, and supporting the resultant shared vision (Marns, 2012). Bass & Riggio (2006) reported that the most influential leaders were transformational in his studies of thousands of international cases (Marn, 2012, p. 28).

2.2.8 Vision, Diversity and Personal Characteristics

2.2.8.1 Vision

Hall (2013, p. 37) said that the leader is responsible for setting the vision of an organization, facilitating the implementation of processes and procedures, and providing direction to achieve that vision. He also said that vision is influenced by culture, and matters relevant to vision include customs, beliefs, and values.

Kotter (1990, p. 105) said that the measure of success of the vision is 'how well it serves the interests of important constituencies—customers, stockholders, employees and how simple it is to replicate it. He adds that there are such things as false visions, which are the ones that ignore the rights of stakeholders and are unrealistic. He says that when an organization that 'has never been better than a weak contender in an industry suddenly begins talking about becoming the first one, that is a pipedream, not a vision. Thus, the vision must be attainable and realistic.

2.2.8.2 Diversity

Hartzell and Dixon (2019, p. 79) pointed out that Diversity has positive implications. These implications include positive outcomes, staff retention, employee satisfaction and improved financial performance. They also pointed out that Diversity is essential in the workplace, as different people bring different ideas, perspectives, experiences, beliefs, and assumptions. To use a metaphor, Diversity is an essential part of the recipe for leadership. They further point out that it facilitates the creation and development of new ideas and the cross-fertilization of

old ones: ‘Diversity is valuable because innovation and learning are the products of differences.

Diversity is not limited to cultural Diversity but includes, for example, Diversity between generations. Barrows (2017, p.3) wrote about an example of this: a GenX CEO hired a Millennial to ‘help him keep a learning mindset’ and keep up to date with evolving technology.

Suskauer (2019, p. 4) said that the Florida Bar seeks to foster an inclusive and diverse environment for its lawyers to promote Diversity in the legal profession.

2.2.8.3 Personal Characteristics

Khan and Javed (2018, p. 129) argued that personal characteristics have an impact on leadership and the ethics of that leadership. They further argued that personal characteristics, in the context of ethical leadership, include fairness, honesty, trustworthiness, good interpersonal communication, high ethical standards, compassion, principled decision making and fair reward distribution. These lead to a more effective and efficient leader.

Personal characteristics can also endear the leader to the follower, giving the leader credibility ‘as a functional role model’ (Esmaelzadeh et al., 2017, p. 684). Chemers (1993, p. 315) said that such personal characteristics include confidence and optimism. He also said that personal characteristics translate into motivating followers and instilling confidence in their leaders. Important leadership characteristics include being ‘dynamic, insightful, risk-taking, enterprising, confident, visionary, determined, ethical, assertive and conforming’ (Atwater et al., 1991, p. 7).

2.2.9 Technology

Technology is a factor relevant to leadership, and leaders need to understand technology to apply it in accomplishing the required tasks and achieving the desired outcomes (Apsorn et al., 2019, p. 640). A leader must embrace technology by enhancing access to that technology within their organization (Apsorn et al., 2019, p. 641).

Greengard (2019, p. 21) argued that a leader’s success in business depends on understanding people, processes, and technology at a deeper level. He says that the level of recent technological advancement is unprecedented and that changes (organizational and clinician’s approach to treating patients), particularly within the oil and gas industry, have been driven by technology. He says that technological change has a flow-on effect, impacting leaders and,

ultimately, the industry. He also says that the key consideration when adopting technological change for business and the oil and gas industry is embracing the technology that adds value. He further argues that as different technology is adopted, different thinking and behaviour will also need to be applied.

2.2.10 Management verses Leadership

Leaders and managers are increasingly studied in human resource development (Hall & Moss, 1998; Feldman, 2002), which reveals that they are expected to initiate development without organizational guidance. Like other leadership scholars, Bennis distinguishes between leadership and management and between managers and leaders. A manager's behaviour and activities focus on controlling, coordinating, and organizing. This differs from a leader, whose behaviours and tasks focus on innovation, vision, motivation, trust, and change. Bennis (1985).

Managers	Leaders
Cope with complexity by...	Cope with change by...
Planning for goals	Setting direction
Budgeting for goals	Developing a future
Establishing agendas and tasks	Having a strategic vision for change
Organizing roles and responsibilities	Aligning of people
Structuring staff and jobs	Communicating direction
Delegating people	Creating coalitions
Monitoring and implementing results	Being commitment focused
Identifying deviations	Motivating and inspiring
Planning and organizing to solve problems	Leveraging human value and potential

Table 2-3: Difference Between Management and Leadership

Note. Adapted from Kotter, What Leaders Really Do (1999). Cambridge, MA: Harvard Business Review.

Leadership and management have been used substitutable in the literature, and they are synonymous in various ways since they both involve working with people and meeting set goals (Bass, 1990, pp. 21-36). Henri Fayol states that a manager performs functions like planning, organizing, staffing, directing, and controlling (Parker & Ritson, 2005, p. 176). A manager has formal supervisory authority by the position or office, while leadership primarily deals with influence. Management and leadership are essential for the delivery of good services. Leadership and management are complementary; both are not replacing one another (Kotter, 1990, p. 103). Leadership and management are similar in some respects, which involve different types of skills, outlooks, and behaviour (Wajdi, 2017, p. 75; Kotter, 1990, pp. 104-106) elaborates the difference between leadership and management as setting direction vs. planning budgeting; aligning people vs. organizing and staffing, and motivating people vs. controlling and problems solving.

Leaders and managers must participate in various learning situations that provide them with both behavioural and cognitive complexity (Karaevli & Hall, 2006), and they must be fast and adaptive learners (Hall, 2002) and strong performers. Leaders and managers must continually utilize self-directed career management strategies (McCall & Hollenbeck, 2007).

This indicates that some individuals can simultaneously fulfill the roles of a leader and manager; leaders are to create new changes, and managers are to apply them (Abraham, Z, 2004). Both roles come with challenges (Cox, J.A, 2016, p. 158). This shows that leadership has become a must in every organization, especially in the current business world, to cope with rapid changes and different needs.

An important distinction is made between management, leadership, and leadership development Cunningham (1986) identifies three different viewpoints on the relationship between leadership and management. Kotter (1988) has argued that leaders and managers are distinct in their roles and functions. Management is about implementation, efficiency, order, and effectiveness (Pedler, Burgoyne, & Boydell, 2004).

2.3 Resilient Leadership Development

Resilience is an individual's ability to cope successfully with adversity and risk. This extends to families, groups, and communities, as well. The ability to be resilient changes over time and is enhanced by protective factors found within an individual and the environment (Stewart, Reid, & Mangham, 1997). Resilient leadership accordingly implies vigorous

combinations of contrary elements such as preparedness and improvisation, clear direction-setting, and flexibility in the face of specific circumstances (Giustiniano et al., p972, 2020), making short-term improvised decisions while considering long-term implications; providing flexibility for adapting to changing circumstances while maintaining control; conducting deliberate search while being open to serendipitous emergence (Ref).

Resilience is about adapting well in the face of challenges, adversity, trauma, tragedy, threats, or whatever one experiences as significant sources of stress Resilience is when you decide to give up on Giving in. “No one can completely avoid trouble, and potential pitfalls are everywhere; climbing out of the hole and bouncing back is the real skill. (Rosabeth M.K, 2013)”

2.3.1 Resilience Overview

Nowadays, most individuals need help to rely effectively on the outside world to solve challenges and issues. Hanson and Hanson (2018) suggest that growing one's internal strengths like grit, gratitude, and compassion is critical because each is key to resilience and long-lasting well-being in an ever-changing environment.

True resilience is measured by more than just persevering severe disruptions and crises. A person needs daily resilience to raise their family, be successful at work, cope with stress, deal with health problems, resolve conflict, heal from pain, and keep on going (Hanson & Hanson, 2018). This literature review investigates the study on resilience and its significance in leadership development. Changing the setting from personal to professional life, what role does this play in leadership development? Furthermore, can resiliency techniques be taught and become a focal point of leadership development initiatives?

This literature review spans peer-reviewed book publications and articles investigating resilience in psychological and professional settings. Much of the literature suggests that a company's capacity for resilience is developed through strategically managing the competencies across staff and manager groups. This management enables the organization to respond resiliently when experiencing disruption, change, and socio- and geo-political challenges. The literature review further explores findings in the studies related to resilience and leadership development and their relationship. Resilience derives from the Latin *resilire*, which means to jump back or recoil (Giustiniano et al., p972, 2020). The origin is applicable today in business because a leader must be flexible and pliant to ensure the organization's changing needs remains constant. The literature review will interrogate resilience as it relates

to its significance in leadership evolution for one's profession in the commercial work setting. In extension, the review will probe resilience within an individual and the relationship resiliency has with the organization. Resilient leadership has two facets which seem to be reactive and adaptive (Giustiniano, Clegg, Cunha, & Rego, 2018).

Resilience exists both at the individual level and within Organizations. Resilient organizations adjust to current adversity and develop the design and strategy to overcome future problems (Teo et al., 2017). Team resilience is in between the concepts of individual resilience and organizational resilience. Team resilience requires clarity on individual and organisational factors to foster resilience at the occupational and organizational levels (Gucciardi et al. (p. 729, 2018).

The organization must recover successfully from disruption, change, turmoil, or crisis. The ability of an individual to respond positively to workplace disruptions is a measure of an individual's resilience (Harland et al., 2005). Leaders' resiliency in the organization enables the organization to become resilient.

2.3.2 Resilience Development

Werner (2004) wrote that the findings of the unique longitudinal 40-year study of resilience in 700 children born in Hawaii in 1955 illustrated compelling insight into resilience in individuals. These children endured many challenging conditions like alcoholic parents, poverty, substance misuse, perinatal stress, poorly educated parents, and family discord. Nevertheless, a third did not present behaviour or learning problems in school. Nearly these children grew up to overcome these issues and live productive lives. Werner's study recognized four main criteria that differentiated resilient from non-resilient individuals: (a) positive perceptions, (b) problem-solving abilities, (c) a strong sense of faith, and (d) positive reinforcement. Werner (2004) found that resiliency is a capability that can be built and developed. The evidence of resilience is more likely when individuals have access to blessings of resources, like human, emotional, and social capital, that enable individuals to develop their resiliency (Zehir & Narcıkara, 2016). A common theme across resiliency research is that a person must show growth from a stressful event to be considered resilient (Britt et al., 2016). Accurate, successful adaptation is also essential to indicate an individual's resilience.

The empowering of optimism may be related to resilient behaviours, which encompasses change adaptability (Quyen et al., 2016). This is a significant question that comes to mind, Is resiliency an outcome of adaption or something that resides within an individual?

The father of resilience theory is known to be the late Norman Garmezy. His decades of resilience research helped the idea evolve from its early focus on mental health to child development and organizational life. Garmezy (1991) argued that if the correct internal and external variables exist, adults and children can bounce back from life's difficulties. Masten (1994) argued that resilience is indeed a matter of adaptation, even though he built upon the work of Garmezy. The Project Competence Longitudinal Study (PCLS), which Garmezy initiated, aided in the development of "models, measures, and methods" related to the concept of resilience (Masten & Tellegen, 2012, p. 345). The following regarding resilience were obtained from the findings of the PCLS:

- There are competencies that, if displayed in childhood, will result in healthy adaptation in adulthood
- Resilient people are adaptive people
- It is possible to be a “Late-bloomer” regarding resilience. (Masten & Tellegen, 2012, pp. 355–357)

Resilience emerges from complicated relationships at different levels of personal experience to the global (Masten, p. 502, 2011). The Britt et al. (2016) researchers differentiate between the dimensions of resilience and the manifestation of resilience. Britt et al. (2016) shared an "Integrative Model of Resilience" (p. 381) to show the examination of resilience, as shown in Figure 2-1. Their study showed that if a person responds positively to a workplace stressor, this is not necessarily considered a demonstration of resilience. In the study of resiliency in the workplace, documentation of stressors should be noted if they exist and are observed (Britt et al., 2016). An additional observable demonstration of a resilient leader is their ability to follow a different course of action from the norm (Lengnick-Hall et al., 2011).

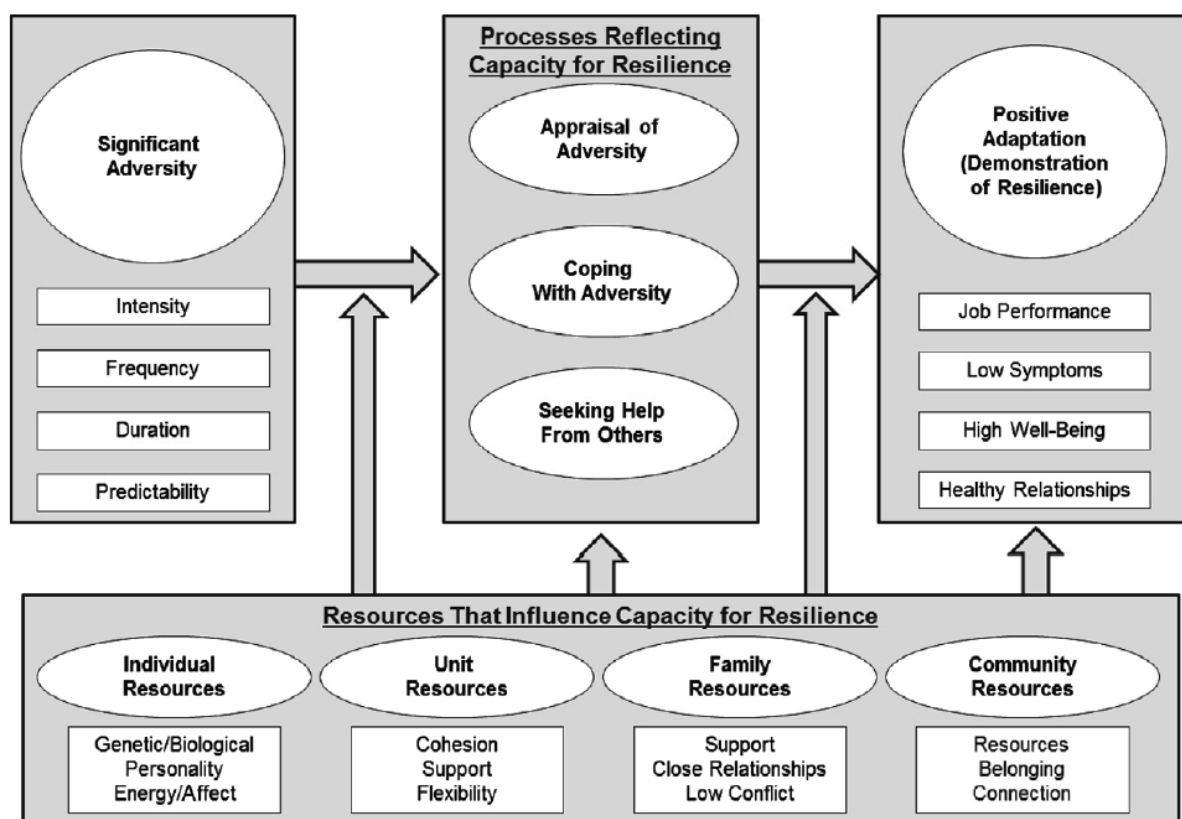


Figure 2-1: Integrative Model of Resilience

Note. Integrative Model of Resilience adapted from “How much do we really know about employee resilience?” by Britt, T. W., Shen, W., Sinclair, R. R., Grossman, M. R., & Klieger, D. M., 2016, *Industrial and Organizational Psychology*, 9(June), p. 381.

The business sector sometimes pulls best practices from the military sector regarding resiliency training in military leaders (Shatté et al., 2016). Incorporating resilience development into their programs gives the organization a competitive advantage, like how the military trains soldiers and their families to navigate and withstand challenges (Shatté et al., 2016). Within vocational and military contexts, multiple evaluation measures of resilience are observed and assessed, such as adjustment, achievement, self-control, and responsibility. In these contexts, participants are selected for roles based on their exploration through different tests to measure the individual's resilience (Britt et al., 2016). However, there is no direct link between an individual's level of resilience and the assessments observed. Many of these assessments closely resemble previous models measuring personality traits, like the Five-Factor Model (FFM) (Britt et al., 2016, pp. 388–389). The FFM model is a hierarchical organization of five personality dimensions: Agreeableness, Extraversion, Conscientiousness, Neuroticism, and Openness to Experience (McCrae & John, 1992). The limitation of this research suggests that future study better differentiates whether these assessment programs assess resilience (Britt et al., 2016, pp. 388–389). The gap in the

literature relates to the measurement instruments available for investigating an individual's resiliency with proof.

2.3.3 Resilience Training

This section reviews the literature on resilience training. These training models are

1. HardiTraining,
2. PsyCap Training, and
3. Comprehensive Soldier Fitness Training.

Understanding the capability to train an individual on resiliency development is essential because this is a central component of the study's hypothesis.

2.3.3.1 HardiTraining

The Hardiness Institute at the University of California at Irvine, Newport Beach, CA, was developed and established by Dr Salvatore R. Maddi.

Hardiness has been established as the pathway to resilience when experiencing a stressful environment (Bonanno, 2004; Maddi, 2005). Maddi defines resilience as maintaining one's performance and health when experiencing a stressful situation (Maddi, 2012). Maddi (2012) states that resilience is not just about surviving a stressful situation but thriving from it.

Dr Maddi and his team developed a training model to build an individual's hardiness. This model engages emotion, cognition, and action in coping well with stressful conditions and uses the feedback from this system to explore further commitment and control and challenge beliefs about oneself in the environment" (Maddi et al., 1998, p. 79).

This training model has grown progressively and is now called HardiTraining (Maddi, 2012). Through inspirational videos, personal narratives, and group exercises, the HardiTraining instructor leads a small group of individuals through the workshops with the critical objective of reinforcing the skills learned (Britt et al., 2016). The training is structured into five major areas: (a) hardy coping, (b) vital social support, (c) hardy relaxation, (d) hardy eating, and (e) hardy physical training, with three areas dealing with components of self-care (Britt et al., 2016). Maddi et al. (1998) discovered that leaders who participated in HardiTraining illustrated increased self-care of hardiness and decreased physical and psychological manifestations.

2.3.3.2 Psychological Capital (PsyCap) Training

Psychological Capital Model was developed as both face-to-face and online training models based on the development of four components of Psychological Capital: (a) hope, (b) optimism, (c) confidence/self-efficacy, and (d) resilience (Luthans et al., 2008; Luthans et al., 2010). These components promote the tendency to adapt to responses to work-related stressors (Britt et al., 2016). Participants in the program are encouraged to reflect on situations in which they think about past stressors, behaviours, and emotions in response to workplace challenges they have experienced and apply that experience to how they ought to respond in the future after taking the program (Britt et al., 2016).

The online version of this program is 2 hours long and asks the online participants to work through a series of decision-making interventions to solve challenges and work stressors in a simulated environment by reflecting on experiences within their organizations (Luthans et al., 2008). Luthans et al. (2008) evaluated the program through participants' self-assessed job performance before and after the training and having the participants' managers rate their employees' performances before and after the training. The results displayed an increase in PsyCap performance after the training event and performance improvement ratings as evaluated by the participant and the participant's managers (Britt et al., 2016). This explains the validity and potential value of the PsyCap Training model as one way to build resilience in a professional setting.

2.3.3.3 Comprehensive Soldier Fitness

United States Army developed Comprehensive Soldier Fitness (CSF), a resilience training program developed to assist soldiers' response to the workplace stressors of combat before and after their deployments into hostile territories by focusing on emotional fitness (Seligman & Fowler, 2011). The program uses real-world scenarios at the centre of its training to illustrate adaptive and maladaptive ways of responding to the stresses of combat by using a strengths-based approach to resilience (Britt et al., 2016).

The program grew out of the University of Pennsylvania's "Penn Resilience Program," which teaches teachers the skills of resilience and positive psychology that they can apply in the classroom. This program aims to reduce student depression and emotional instability across the academic year (Seligman et al., 2009).

The Comprehensive Soldier Fitness model focuses on increasing a soldier's emotional, social, family, and spiritual fitness (Britt et al., 2016). Non-Commissioned Officers (NCOs) teach

this program and become Master Resilience Trainers (MRT). Appointed Non-Commissioned Officers attend a train-the-trainer session through the Penn Resilience Program and become the primary instructors in the Army's Comprehensive Soldier Fitness program (Reivich et al., 2011). Notably, most training in the United States Army does not go through a scientific evaluation before implementation (Britt et al., 2016). In addition, Britt et al. (2016) stated that there was an absence of standardized resilience training previously established in the Army at the time CSF was developed. Understanding and leveraging the integrative model of resilience (Figure 2-1) combined with training programs such as hardiness training have proven to reduce work-related stressors. Further research should be conducted to measure the long-term impact of training and if this training does build employee and leader resilience over time.

Further study suggests that building resiliency ideas across the organization can and should be grouped into four areas: human capital development, valuing employees, fostering learning and collaboration, and supporting challenges at work (Kuntz et al., 2017). Kuntz et al. (2017) state that a predecessor to resiliency does not have to come from experiencing an organizational disruption. Instead, it can come from a proactive measure to improve a person's capability, preparedness, and agility. This concept is consistent with recent scholarship urging a mindset change on company resilience from one that is disruptive-response-focused to one that is based on capability-focused development (Linnenluecke, 2017; van der Vegt et al., 2015). The study establishes the significance of preparing leaders ahead of time versus waiting to react when disruption comes.

2.3.4 Characteristics of Resilient Leaders

Resilience is not about a sharpened capacity to predict and foresee the future (Marshall, 2010). However, it does require a capacity to absorb future events, regardless of their scale, magnitude, and severity of impact. Resilience is the ability to absorb change (Drew et al., 2008). The six strengths of resilient leaders are (a) accurately assessing past and current reality, (b) being optimistic about future possibilities, (c) remaining faithful to personal values, (d) maintaining a strong sense of personal efficacy, (e) invest personal energy wisely, and (f) act on the courage of personal convictions (Patterson & Kelleher, 2005). Each of these six strengths reflects the actions of a great leader in any organization, and each can be developed within the leadership development process over time. The way to do this is to build or participate in business simulation exercises, such as the company BCM's e-Match, which requires individuals to solve business challenges by utilizing diverse resiliency

capacities to work through a set of simulated programs. Through simulation and practice, individuals can build agility using these strengths as part of their leadership tool kit (Patterson & Kelleher, 2005). Quyen et al. (2016) provided a few examples of modelling resilient behaviour from a leader: optimism, empowering leadership, and proactive personality are attributes of those who have developed resiliency. Most studies to date have conceptualized resilience as an individually developed resource or the manifestation of a response to adversity rather than a dynamic capability that enables innovation and preparedness for future disruption (Linnenluecke, 2017). The research supports the case for building resiliency before the challenge or crisis to shape the environment ahead of time.

Resilient leaders create a positive environment in which the team members in the organization feel enabled to build a better future (Boyatzis & McKee, 2005). Resilient leaders keep the organization on task and track during external disturbance and inertia (Allison, 2012). Resilient leaders consistently demonstrate three basic skill sets (Lane et al., 2013). First, they realize they need to create environments where their stakeholders learn from each new event as it occurs (Sutcliffe & Vogus, 2003). Second, resilient leaders understand that the organization cannot reach its targets on forecasts alone (Evans, 2010). Finally, resilient leaders must endure the aspects of the company that allow it to reorganize and re-innovate itself following the change event, thereby increasing in advance organizational resilience (O'Malley, 2010; Temponi, 2005). Resilient leaders can withstand the moment, but ultimately, they hold the key to the future (Walker & Salt, 2012).

2.3.5 Emotional Intelligence and Resilience

What is the link between emotional intelligence (EI) and resilience? As defined by Daniel Goleman, EI is the ability to recognize feelings in both self and others. Leaders with EI can use this ability to motivate themselves and others while managing emotions (Goleman, 2001). The study on leader resilience and leader self-differentiation was studied by (Howard & Irving, 2013). They found that those who demonstrate higher levels of self-awareness and identity also demonstrate higher levels of resilience. Self-differentiation in this study represented a person's emotional capacity to not over-rely on the opinions of others, which was the researchers' association with self-awareness (Howard & Irving, 2013). Bande et al. (2015) studied emotional intelligence and resilience elements in a salesperson's intention to leave their organization. The authors contended that in sales organizations, the turnover of salespeople is higher than in non-sales organizations and comes at a higher cost to the organization when someone leaves. According to the American Psychological Association,

the ability of someone to regulate and manage their emotions and reactions is an example of high EI and a resilient personality (as cited in Bande et al., 2015). Managing one's emotions is an essential step in preventing emotional burnout. Emotional exhaustion can result from prolonged work-related stress, often leading to workplace burnout (Bande et al., 2015). In the role of a salesperson, the very nature of the position can lead to stressors outside of a typical employee's responsibility. Particularly in sales organizations, the sales individual usually holds daily, weekly, monthly, quarterly, and annual quotas. These quotas can be stressful, especially if the salesperson faces internal or external pressures that cause them to fall behind on their targets (Bande et al., 2015). Combating these types of workplace stressors can be assisted by an individual's level of resilience (Naemi et al., 2014).

Bande et al.'s (2015) study show that the lower the level of emotional exhaustion, the higher the level of resilience, and vice versa. In addition, a salesperson's resilience will positively impact that person's propensity not to leave their organization (Bande et al., 2015). The researchers further state that a sales individual's EI reduces the likelihood of that person suffering from emotional fatigue. Employees with higher levels of interpersonal skills can tolerate emotional pressure better when there is evidence of high levels of EI.

The reduced effect of burnout and emotional fatigue was shown in the results (Van Rooy & Viswesvaran, 2004). Bande et al.'s (2015) study shows the link between EI and resiliency and states that building resiliency can reduce emotional exhaustion and weariness. Given this connection, sales organizations should focus on EI capabilities and resiliency development to improve retention and increase employee engagement with the professional sales individual (Bande et al., 2015).

2.3.6 Resiliency in Organisational Change

Restless and chaotic business environments are powered by the pace of change, fierce competition, and frequent high-intensity customer demands infused with sophisticated, matrix-oriented business units. These environments make organizations increasingly exposed to risk and can lead to a company's vulnerability.

Organizational resiliency is required to respond to the demanding needs of change (Kantur & Iseri-Say, 2012). Organizational change tests a team or department's resiliency and puts added pressure on the leaders who lead the team through change. A leader who manages through the change in the organization must do so with a tolerance for some degree of the unknown. The leader needs to show the ability to respond quickly, make timely decisions,

and speak with clarity. The demonstration of learned resourcefulness, ingenuity, and construction enables individuals leading organizations to engage in a robust, unconventional, and disciplined response to unprecedented challenges and change management initiatives (Lengnick-Hall et al., 2011). Demonstrating these behaviours combines originality and initiative and enables the organization to capitalize on the immediate situation (Lengnick-Hall et al., 2011). Most leaders are responsible for implementing change and leading their organizations; how does resiliency lead to change successfully?

There are three critical concepts for organizational change and resilient leadership (Lane et al., 2013):

- 1) – the ability to embrace new models, organizational relationships, and technology.
- 2) Distinctiveness – find a unique niche and seek to understand differences.
- 3) Alignment – finding the optimal means for matching corporate resources with the order. The ability to master these characteristics often determines the extent to which resilient leaders are influential. (p. 4)

Leaders must bring their teams along during mergers, acquisitions, crises, or disruptions, managing through the change initiative. Lane et al. (2013) asked two questions: "1) how can resilient leaders develop if required? 2) What are the responsibilities of contemporary organizations to create the atmosphere for resilient leaders to grow and mature?" (p. 7). How do people demonstrate resiliency and separate themselves from others as they move through change in the workplace? Ultimately, resilient leaders increase the organization's ability to withstand hardships in times of crisis and change. Leaders are responsible for leading the organization through times of disruption and bringing the organization out of the crisis even stronger than before it entered a time of hardship.

Changes in interactions

Exploitation and Exploration

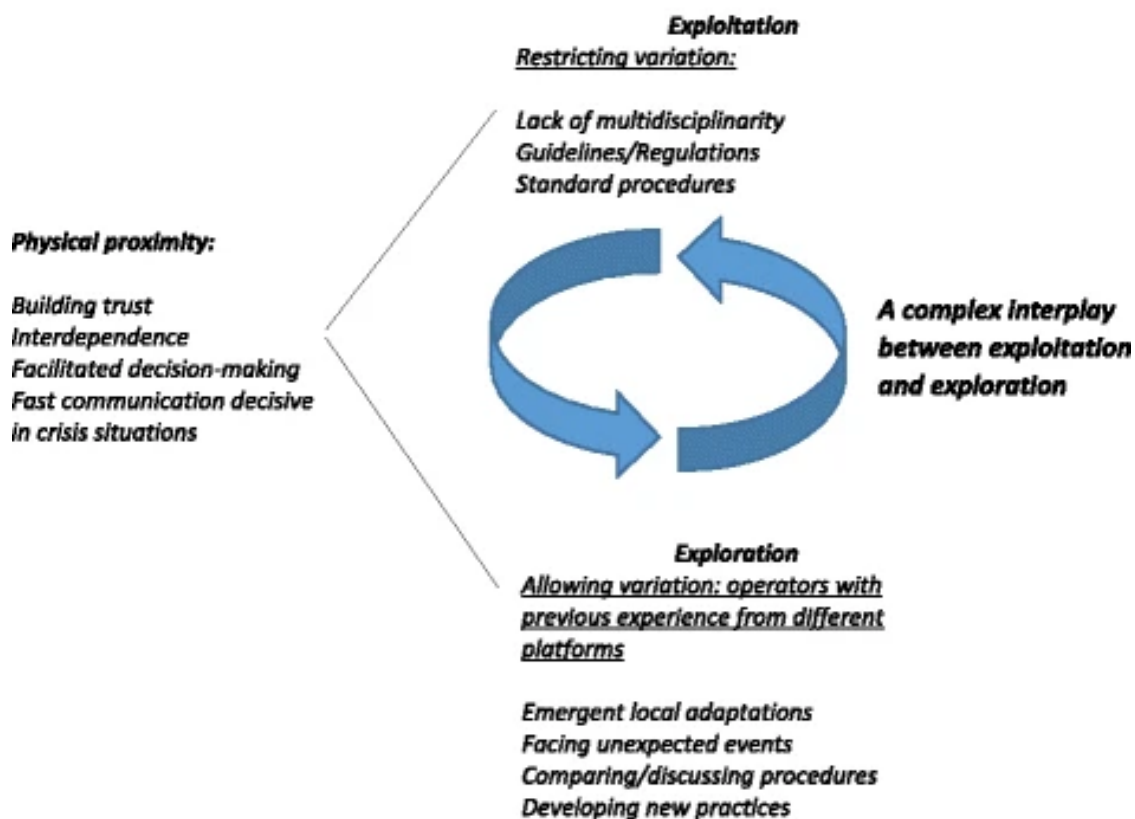


Figure 2-2 Data Analysis Rationale - Bento (2018)

2.3.7 Resiliency and Managing Crisis

A critical element of understanding individual and organizational resilience is that to survive a crisis, the individual and the organization must endure the onset and the duration of the crisis at multiple levels (Darkow, 2018). A crisis does not just impact the leadership; it can have rippling effects across the organization, from the leadership to the individual contributors (Kantur & Iseri-Say, 2012). Furthermore, a leader's health and well-being are at risk when increased exposure exists during organizational turbulence or crisis (Holmberg et al., 2015). Leaders have an increased responsibility to become more significant in aligning with crisis, including health and well-being as sources of resilience (Holmberg et al., 2015, p. 155).

An organizational crisis is one of many reasons to build resiliency in leaders. Uncontrolled Crises such as technology developments, regulations or governmental policy changes, or competitor advancements can also require resiliency to move favourably. Organizations have had to incorporate technological innovations into their business models, meet the differential needs of diverse employees and clients, and deal with changing government policies and

regulations (King et al., 2015). The results are severe challenges and adversity for individuals and teams. How they respond to this inevitable adversity, that is, their resilience has emerged as a key, strategically important organizational behaviour for success, growth, and survival. (p. 782).

Companies can and should focus on preparing their leaders for the crisis before it ever happens to mitigate the impact of the crisis when it occurs (Darkow, 2018). There are little to no adverse psychological symptoms during a crisis for Individuals with high resiliency. They can continue to fulfil professional and personal responsibilities and embrace new goals or assigned tasks (Bonanno et al., 2007). As organizations usher in a new generation of leaders, the L&D team must consider building resiliency development into the talent and leadership development programs they are responsible for administering. This action will better enable the organization to withstand a crisis's uncertainty that negatively impacts local and global business initiatives.

Christopher Howard and Justin Irving (2013) identified a relationship between self-differentiation and leadership resiliency in a study on leadership formation and resiliency. They posited that self-differentiation occurs when an individual does not depend on the input and advice of others for emotional support. The concept is related to identity and self-awareness; if one demonstrates a high degree of self-awareness, one is likely to have higher degrees of resiliency (Howard & Irving, 2013). Howard & Irving connected the importance of self-awareness to the development of resilience, supporting the notion that there is a link between developing one's emotional intelligence and resilience.

Striving during organizational disruptions is another topic related to resilience and building a resilient organization. Nowadays, disruption and organizational crises are recurring in a business environment. For example, in October 2018, GE made a sudden and unexpected change from CEO John Flannery to Laurence Culp. Mr Flannery's strategy was not meeting the board of directors' expectations at GE, and as such, the board removed Mr Flannery and appointed fellow board member Laurence Culp. John Flannery was only in his role for one year, which is why there was a dramatic shift in leadership at General Electric (Sheetz, 2018). After the dramatic change in leadership, shares climbed 7% by the end of the day after the announcement, clearly signalling that the market agreed with the change at the top (Sheetz, 2018). In today's complex, fast-paced world, organizational chaos is becoming increasingly common (Sommer et al., 2016). In the case of GE, the organization faced a crisis with the

departure of its CEO, and the outcome of a quick shift in leadership could have hurt the business and its shareholders, given the number of challenges and crisis taking place across the company. GE's stock rose 30% through quarter one of 2019, signalling to shareholders and others that the company is favourably coming out of its crisis (Gurdus, 2019).

However, to add balance to Gurdus' statement, there needs to be more time to evaluate the long-term impact on shareholder return. The Leadership change at GE contributes to sustainable, long-term shareholder returns in GE stock. GE has the potential to be a great example of what resiliency is like in the face of enormous change.

During times of disruptions, it is essential to understand that the leader with other employees must be resilient. The organization's employees and frontline managers must also be resilient to navigate the crisis. Sommer et al. (2016) explains that an organization to survive during times of great crisis relies on the ability of its members to persist and endure their responsibilities, despite the adversity they face, which means employees must show resilience (p. 173). In addition to demonstrating resilience, a positive attitude and positive affect play a significant role in how someone responds to disruption or crisis and how quickly they can bounce back (Sommer et al., 2016). The same is true for negative impact; if an individual or team responds negatively, the team is less likely to respond resiliently and rise to the challenge (Sommer et al., 2016). Sommer et al. (2016) aimed to examine how team leader behaviours can influence team members' actions during times of distress and crisis. The authors concluded that transformational leadership behaviours, such as remaining calm and communicating with clarity in a crisis, demonstrate higher positive outcomes among team members, which results in high resiliency across the organization. Sommer et al.'s (2016) research support Darte-Baah's (2015) research on the relationship between transformative-transactional leadership theory and resilience leadership theory by demonstrating both the charismatic and practical leadership traits of the leader.

2.3.8 "Resilient Leadership and its Relationship to Transformational-Transactional Leadership Theory"

Transformational leaders leverage a call for higher moral authority and ethical standards and use charisma to influence their followers to join them toward a higher purpose, vision, and mission fulfilment (Nikezic et al., 2012). Transactional leaders believe in formalization, in the strict structuring and standardization of organizational activities to ensure predictability, compliance, and control, to achieve set goals" (Nikezic et al., p. 8, 2012). To yoke

transformational-transactional leadership principles is to look at leadership as contingent reinforcement of followers by a transactional leader or the moving of followers beyond their self-interest for the team's good by a transformational leader" (Bass, 1997, p.130).

Does transformational-transactional leadership theory intersect with resilience leadership theory? If so, what is the relationship? Dartey-Baah's research illustrates those qualities such as strategic thinking, emotional intelligence, change/adaption orientation, and collective leadership are encompassed within resilient leadership theory and thus are connected to transformational-transactional leadership theory (Dartey-Baah, 2015). Dartey-Baah states that a new addition to the collection of theories on leadership will be the resilient leadership theory. This new leadership orientation has emerged in response to the severe and episodic nature of today's threats or challenges, both human-made and natural, crippling the organization's ability to perform and meet the demands of the current world. (p. 1)

The purpose of Dartey-Baah's conceptualization is to illuminate the connection between these three leadership theories and propose that resilient leadership theory is a combination of transformational and transactional leadership theory (Dartey-Baah, 2015). Transformational-transactional leadership theory complement one another. Resilience leadership theory connects these two theories to form a theory that incorporates and reflects the combination of Transformational-transactional leadership theory.

Resilient leadership in this context combines performance and change orientation that is in tune with the organization's goals while remaining focused on all stages of change management, both internally and externally, across the business ecosystem (Dartey-Baah, 2015). Resilient leadership is the ability of an organization to sustain its competitive advantage over time through its demonstration of excellent performance and rapid innovation to navigate turbulent changes in the business environment (Dartey-Baah, 2015). Resilient leadership theory builds off the work of Patel (2010), who conducted an empirical study that introduced three situations in which a leader would have to demonstrate resilience as a resilient leader. The three types are T1 resilience in reacting to stressful situations, T2 resilience in creating stressful situations, and T3 resilience in chronic situations (Patel, 2010). Types 1 and 2 are episodic; the third type refers to a leader's ability "to deal with continuous stressful management challenges. In effect, it may be repeated episodes of Type 2 resilience strung out over some time" (Patel, 2010. p. 3). Patel (2010) and Dartey-Baah (2015) successfully integrated the three leadership concepts—transformational, transactional, and

resilience theory—as a compelling mix, essentially stating that they are all the same. In a separate study, Harland et al. (2005) argued that leaders demonstrating transformational leadership behaviours, such as inspirational leadership, should enable resilience in others by inspiring hope and resolve in their subordinates. The collection of research provides insight into how L&D teams can leverage existing learning strategies on transformational, transactional, and resilience leadership into the building blocks of their leadership development programs.

2.4 "Resilience and Leadership Considerations from the Oil and Gas Corporate Environment"

2.4.1 Overview of Oil and Gas

This introduction to the oil and gas industry provides a snapshot of the petroleum sector. Oil and natural gas are significant industries in the energy market and play an influential role in the global economy as the world's primary fuel source. The processes and systems in producing and distributing oil and gas are highly complex, capital-intensive, and require state-of-the-art technology.

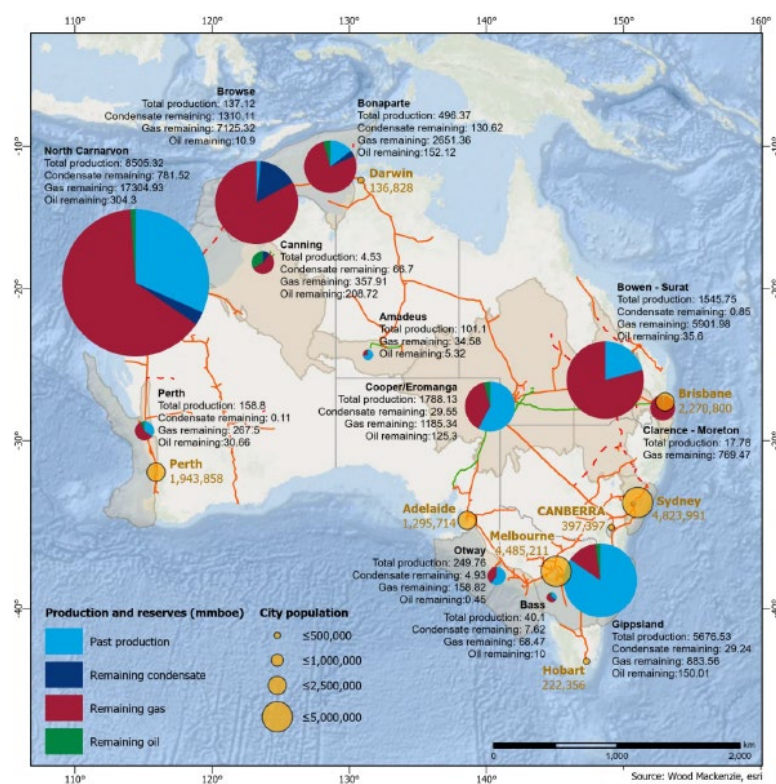


Figure 2-3: Hydrocarbon resource deposits and key population centres in Australia (Source: Australia Oil & Gas Industry Outlook Report)

As shown in Figure 2-2, most remaining hydrocarbon reserves (i.e., North Carnarvon, Browse, Bonaparte) are far from the key population centres along the east coast. According to Australian Energy Statistics (2020), oil (the largest share of Australia's primary energy mix) in 2018–19, at 39 per cent of the total. Refined products accounted for more than half of Australia's total final energy consumption in end-use sectors. In 2019, the global GDP was estimated to be \$86 trillion, and \$3.3 trillion (3.8%) of the global economy is from oil and gas.

The oil and gas sector are critical globally, generating hundreds of billions of dollars annually. For example, in Australia, they often contribute a significant amount to the national GDP. Table 2-3 shows the Australian population to GDP and energy consumption.

	2009–10	2018–19	Average annual growth	
			2018–19 (per cent)	10 years (per cent)
Population (millions)	22.0	25.4	1.5	1.6
GDP (\$ billion)	1,492.5	1,885.0	1.9	2.6
Energy consumption (PJ)	5,823.3	6,196.0	0.6	0.7
Energy consumption per capita (GJ)	264.3	244.3	-0.9	-0.9
Energy intensity (GJ/\$ million)	3,901.8	3,287.0	-1.3	-1.9
Energy productivity (\$ million/PJ)	256.3	304.2	1.3	1.9

Source: Department of Industry, Science, Energy and Resources (2020) *Australian Energy Statistics*, Table B

Table 2-3: Hydrocarbon resource deposits and key

Upstream, midstream and downstream are the three key areas energy sector as shown in Figure 2-4:

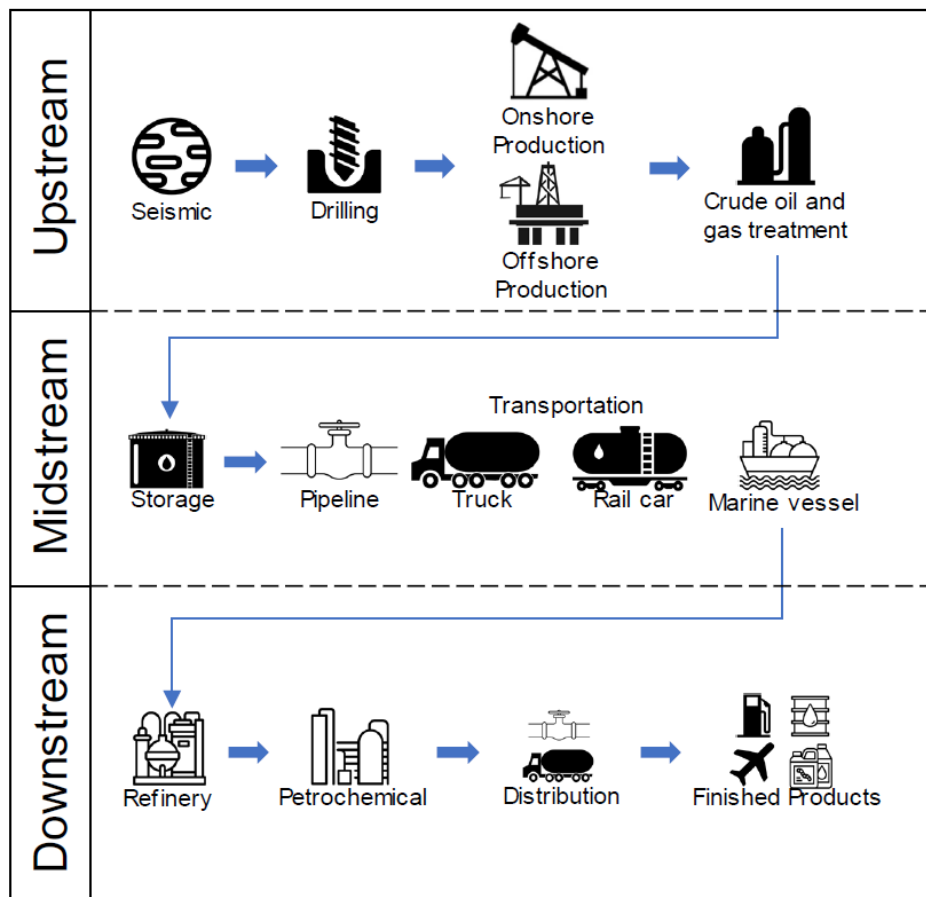


Figure 2-4: Oil and gas value chain

- Upstream is E&P (exploration and production). This involves the search, extraction and production to recover oil and gas.
- The Midstream sector is about oil and gas transportation, processing, and storage. The moment resources are recovered. They must be transported to a refinery, often in a completely different geographic region than oil and gas reserves. Anything from tanker ships to pipelines and trucking fleets is part of transportation.
- Downstream refers to filtering raw materials obtained during the upstream phase. Such as purifying natural gas and refining crude oil. The distribution, i.e., marketing and commercial of these products to consumers and end users in several products like petrol, natural gas, diesel oil, kerosene, gasoline, lubricants, jet fuel, asphalt, heating oil, LPG (liquefied petroleum gas), and types of petrochemicals.

Figure 2-5 shows the market share of the critical areas of oil and gas in Australia. Upstream Activities (\$70bn), Midstream activities (\$368bn), and Downstream activities (\$1,313bn).

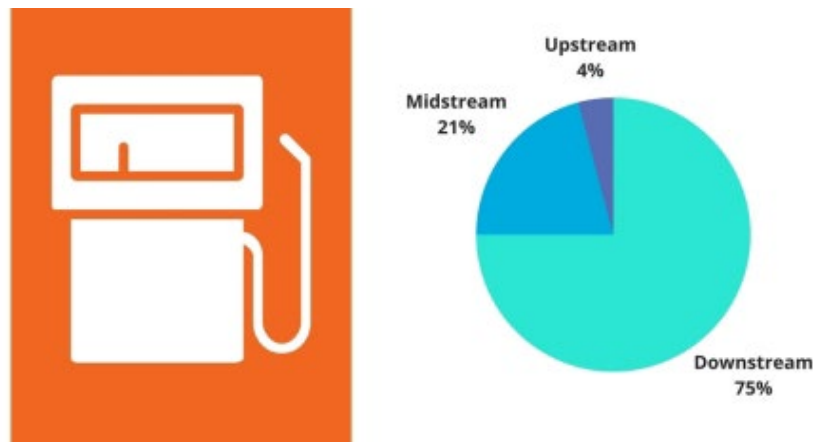


Figure 2-5: Market share of Oil and gas in Australia

Fuel oil and gasoline (petrol) are the oil and gas industry's most significant volumes of products. Petroleum is the primary material for many chemical products, including pharmaceuticals, fertilizers, solvents, and plastics. Petroleum is, therefore, integral to many industries and is critical to many nations as the foundation of their industries. Australian energy consumption by fuel type is shown in Table 2-4.

	2018–19		Average annual growth	
	PJ	share (per cent)	2018–19 (per cent)	10 years (per cent)
Oil	2,402.1	38.8	1.3	1.7
Coal	1,801.6	29.1	-2.5	-2.3
Gas	1,592.7	25.7	2.2	2.7
Renewables	399.6	6.4	4.6	3.9
Total	6,196.0	100.0	0.6	0.7

Source: Department of Industry, Science, Energy and Resources (2020) *Australian Energy Statistics*, Table C

Table 2-4: Australian energy consumption by fuel type

Working in any industry has inherent challenges unique to the sector in which it evolves. It is a commonly accepted premise that if you like your work, you will succeed easier, despite the challenges. However, a detailed analysis will show that working hard is never enough and

that leadership and success require a great deal of resilience, accompanied by a privileged insight to capture opportunities, to grow in the ranks.

As the oil and gas industry faces the biggest crisis in decades, the sector needs to build resilience considering an uncertain future and future-proof its strategy.

The rapid drop in Brent oil prices and the Covid-19 pandemic put oil and gas companies globally under pressure. These circumstances have resulted in oil and gas companies experiencing a crisis threatening their profitability, disruptions to operations, and supply chains coming under pressure.

Considering macroeconomic forces and an uncertain future, leaders urgently need to respond and build resilience for their businesses. The question that remains centres on the specific actions to take in a crisis and the measures to future-proof their organizations from further uncertainty impacting the industry in the long run. Figure 2-6 presents the scenario analysis for Oil and Gas of per (Bart, 2020).

Scenario analysis for the O&G industry

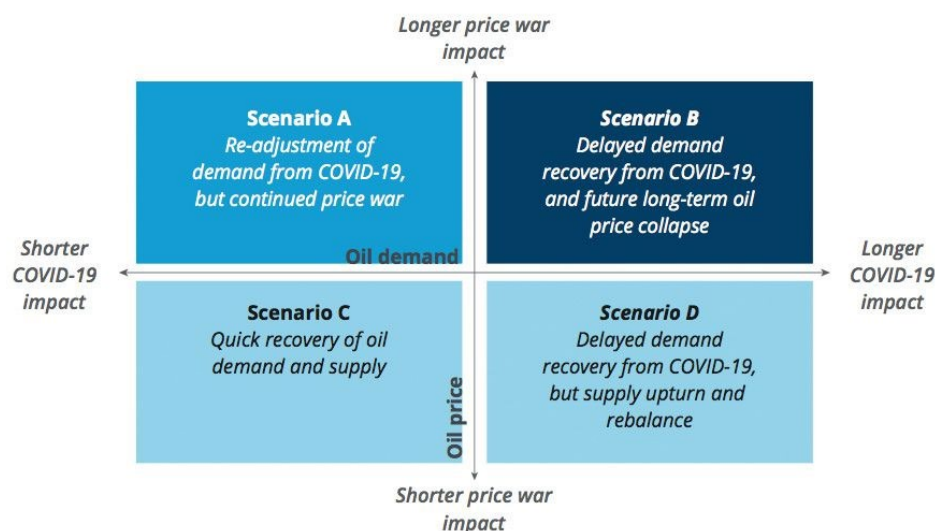


Figure 2-6: Scenario analysis for Oil and Gas (Source -Bart, 2020)

A possible best-case scenario may be considered for a quick recovery of oil demand and supply. Oil and gas companies responded by taking extra measures during a possible worst-case scenario which dictates slow recovery, and a low oil price level will continue longer.

The Covid-19 pandemic has significantly impacted the already stumbling growth in oil and gas demand as international travel took time to recover and companies adapted to home working arrangements, thus reducing commuting worldwide.

Oil and gas companies addressed immediate, short-term tactical responses and provided longer-term strategic options to accommodate future uncertainty. The costs and risks related to shutting down production make the exercise essential for the oil and gas industry, difficult to turn on and off overnight.

In the shorter term, oil and gas companies primarily focussed on liquidity, value preservation, anticipating the potential scale of the crisis, and continuity in operations to minimize losses, budget cuts, and supply chain stabilization and define other tactical response measures. In the medium term, emphasis was placed on profitability, mainly through savings on capital expenditure and maintaining flat dividends. The nature of the oil and gas industry will make the medium and longer-term decisions to have a longer-term impact.

For the organization to have longer-term success, they need to identify strategic options that address energy transition by anticipating the future business environment, assessing areas to focus its investment plans on, evaluating the lasting impact on areas such as the supply chains, workforce, and identifying new skills and innovation needed to fulfil new strategies. (Bart, 2020).

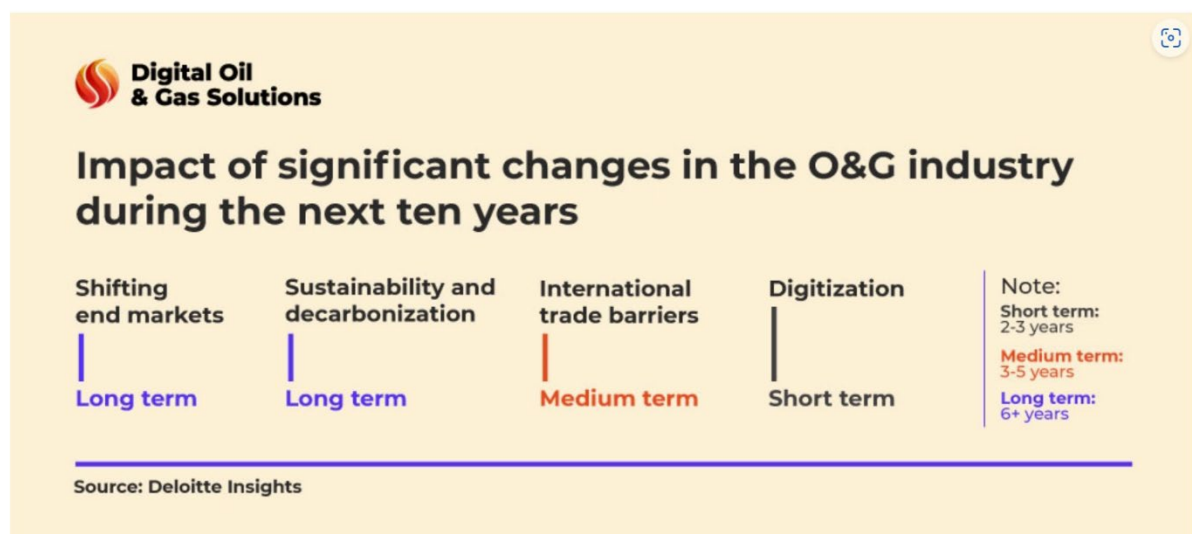


Figure 2-7: Impact of significant changes in the Oil and Gas during the next ten years
(Source: Deloitte Insights)

Of all industries, oil and gas have characteristics that extend bridges to many other sectors. These are as follows:

- The global nature of the business
- The highly specialized profile of the workforce
- The cycles derived from the oil price fluctuations.

- Oil and Gas Strategic Arena

2.4.2 The Global Nature of the Business

With almost all countries producing oil and gas in large or small volumes, oil accumulations have become another concept. Oil and gas resources can be considered a commodity depending on the price level and could or not be subjected to production. This situation creates a global outreach for technological solutions, as all oil fields eventually need water, CO₂ or steam injection, artificial lift, and other recovery mechanisms and production enhancement processes. So, technology providers, oil field service companies, and contractors have already worked around the globe and established offices, workshops, and training centres globally. Likewise, the exploration and production companies, in the old times, mainly operating with a focus on a reduced number of countries with vast reserves of oil, faced challenges in the seventies to embrace and accept as part of the new business scenario the incumbent National Oil Companies (NOCs) and the Organization of Petroleum Exporters Countries (OPEC). This new scenario at the time revolutionized the scheme of things entirely, and the balance of the business in the oil sector changed forever. More recently, after a significant crisis, in 2008, the industry embraced a new change that started to evolve rapidly from 2010 and onward: the production of shales. This unthinkable event again reshuffled the markets and positioned the USA as a player in the export market, presenting a new challenge to the usual providers of crude on the planet.

The corporate environment follows this dynamic. Every company dedicated to the oil sector has a multinational workforce and generally operates in several countries and continents. Leading a multinational workforce presents challenges that are only sometimes visible to an untrained eye. Leaders need to handle communication and motivation differently with different sets of people, depending on their culture. Diverse cultures have challenged the importance of leadership because leadership is much more than vision, experience, decision capacity, or technical knowledge. It is very much communication capacity, which needs to be changed depending on who will receive the message. Our learnings in the oil industry, handling, influencing, or leading a multinational workforce in various countries, highlight the need for tolerance and respect as fundamental traits to success. Leadership is perceived differently in different regions. Moreover, if leaders are highly regarded and frequently almost revered in regions, they are severely scrutinized and targeted with criticism in other areas. The leaders then adapt and must resist succumbing to conceit in one extreme, or doubting their self-worth, in the other.

Additionally, they must become translators and communicate adequately with the different cultures they deal with, ensuring the business objectives are met in meetings with few individuals or presentations for town-hall large audiences.

Multiculturalism also triggers a special kind of resilience: to keep attempting better ways of communicating with different cultures and understand the hidden signs of acceptance or rejection from people of different cultures, and to navigate “by instruments” on many occasions that may result in an unfamiliar situation.

2.4.3 The Highly Specialized Profile of the Workforce

Industrial sectors have a high demand and utilization of technology, and let us think, for example, the aeronautical sector or telecommunications. The oil and gas sector has been an industrial area of massive utilization of emerging technologies.

It is a fact that the oil sector is a massive consumer of technological solutions but a slow adopter. Once any innovation is proven to impact oil production positively, it will be extensively applied globally. When fresh graduates enter the oil industry workforce as new hires, they are submitted to extensive training programs of 3 to even five years before they become fully operational. This is a reality since academia prepares the engineers and other scientists employed by the oil sector with direct and conceptual knowledge. Nevertheless, the instrumentation of that basic or conceptual knowledge into practical implementations at work requires a long period of complex processes and schemes of training, self-learning, mentoring, and on-the-job training so that the employees become fully operational.

Furthermore, the near-term future will require even higher specialized skills, as progressively, the oil fields demand more technological solutions to sustain production, requiring tertiary production schemes, complex downhole studies, and drilling operations to drain the reservoirs with an intelligent approach, not damaging what is left. These requirements set many challenges for the technical management and human resources or training departments of the oil and gas companies, as incrementally, the search for good resumes becomes very challenging, looking for professionals with the best preparation, willingness to relocate and with multinational backgrounds.

The capacity to relearn has become more important than the capacity to learn. Professionals who leave behind old ways of work to embrace new technologies and their pertinent

workflows will advance more rapidly than their colleagues who stick to their work or technological solutions.

This applies to all industries as technology increasingly becomes an integral part of the workflows in every sector. Cappello & Hashim (2018) stated that in 1977, Maria was invited to Statoil for their internal Annual Symposium as a Keynote speaker and to the “Recent Advanced and Road Ahead” session of the SEG, Society of Exploration Geophysicist’s Annual Meeting. It was to present what she was leading in PDVSA Research Centre for 4D or time-lapse seismic. When repeatability issues were starting to be a problem in characterizing the response of 4D analysis, Maria’s research team was already planting permanent geophones in Lagunillas field, near Maracaibo Lake in Venezuela, and monitoring steam injection effect in seismic attributes. She left behind what was usual in seismic acquisition to test innovative ways of enabling the repeatability of the seismic 3D acquisition process for time-lapse reasons. She was developing her leadership profile, but most interestingly, the leaders of her organization provided the necessary endorsement, confidence, and support, so that she could pave the way toward new advances in her technical field of interest. This kind of leadership is nutritive of a highly specialized workforce. A degree of freedom, based on trust in the technical and leadership capabilities of the individuals deserving it, is needed to trigger new leadership levels. Other experiences, later on, sustained this vision that managerial support and freedom are indispensable to fostering leadership.

Another example of the highly specialized profile of the workforce and the challenges it poses to leadership comes from the shift that was applied in the drilling strategy in the Oil Companies, all the wells in the drilling plan were vertical, and when demanded to strategize the drilling plan, consider more efficient (and modern) ways of drilling, maximize production, and optimize surface land use. It was a challenge, as the workforce needed to be used to the new schemes of multilateral wells, horizontal wells, and advanced completions in several intervals for each well. The shift to the new strategy required parallel actions taken in training, awareness campaigns, and the hiring of specialized companies to support the Oil company’s efforts in this shift toward new drilling schemes. The workforce must be uplifted in parallel with the technological changes in every industrial sector. Leaders need to be aware of the technological trends to steer the efforts to reach new technological levels and match the competitors. Effective leadership enabled these changes.

2.4.4 "The Cycles Derived from the Fluctuations of the Price of Oil"

The price of oil fluctuates. And not by slight variations. It fluctuates rapidly and harshly, seriously impacting the business. It is no secret that the oil and gas industry is hit by the reactive fashion with which we respond to the fluctuations in the price of oil. In consequence, the profile of experience and age of the workforce experiences variations as well, inserting gaps only sometimes beneficial to meet the demands of the business or the dynamics of the sustainability of oil production. Figure 2-8 shows 10-year Oil price (US\$ per Barrel).

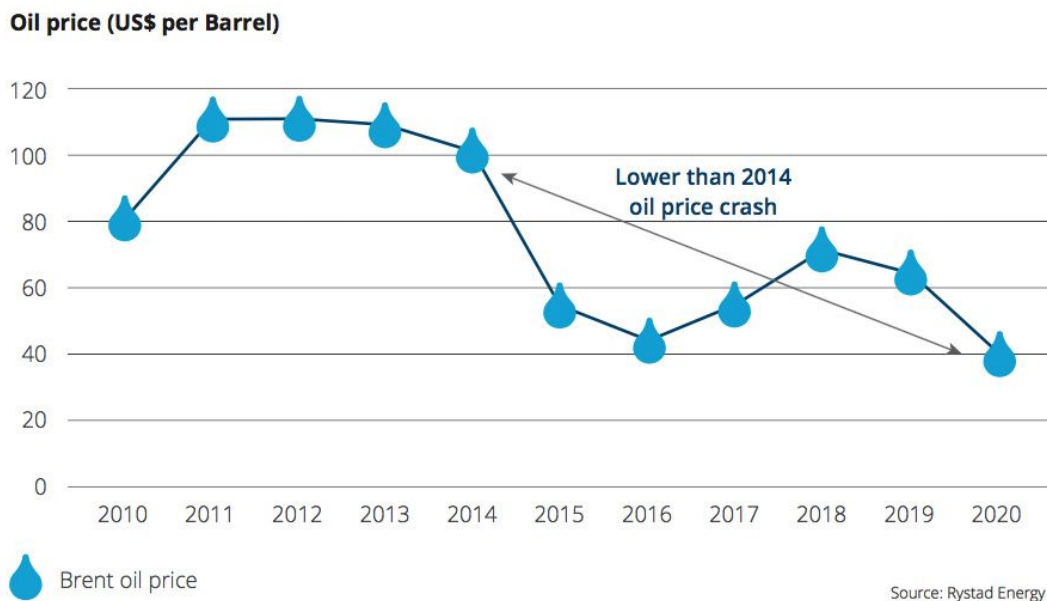


Figure 2-8: 10-year Oil price (US\$ per Barrel)

We find our organizations lacking the technical capacity after massive layoffs are actioned, especially by service companies and international oil operators, seeking to reduce costs to benefit their stakeholder's profits. Nevertheless, this approach to business has left our industry helpless to cope with the oil demand when and if the price returns to profitable margins. It is a story already experienced but not learned at all. In 2016, the industry again let go of the valuable minds and hearts of people committed to the industry. In 2017, when the price returned to profitable levels, we witnessed recruitment campaigns at a global scale.

The cyclic nature of the oil and gas industry is shared with other industries, like the tourist and academic sectors, which follow the major economic trends generally tied to the oil and gas price and movements when companies and organizations do not have stability in their intake and attrition numbers but behave in response to the waves in the market, dependent on prices, the management and leadership experience additional challenges. Challenges derive

from producing the same or more volumes of products with fewer personnel, often without key personnel.

Also, they must deal with shifts in the driving forces that command production and marketing, changed by the new dynamics of the low oil price. The significant gaps in expertise that these low-price periods produce in the oil industry are difficult to fulfill, and their effects remain for decades. The industry definitively owes its resilient leadership to several of these problematic low prices of oil cycles.

Lessons learned from the cyclic nature of the oil industry resonate loudly in other sectors that have kept their crucial expertise alive and within their ranks.

The resilience of many oil industry leaders comes from having successfully survived several of these cycles, reinventing themselves. These leaders faced severe and many times extreme challenges in their organizations, discovering within themselves the strength and courage to launch entrepreneurial initiatives, alone or with partners, in what is a challenging path that propelled the best in them to flourish.

2.4.5 Oil and Gas Strategic Arena

A Strategic Arena (SA) is an organisation's immediate ecosystem in which various supply systems compete to serve a specific customer demand. Every organisation competes in at least one strategic arena, either as a business-to-business or business-to-consumer organisation (Khimji, 2021, p.3).

Every Strategic Arena is built upon a demand system comprising a set of customer activities related to their consumption needs. The SA's demand will also be served by an array of competitive supply systems and one or more complementary supply systems (Khimji, 2021, p.3). A complementor is another supply system that provides essential products/services that support/facilitate the usage of your supply system offer prior to or following its purchase decision (Khimji, 2021, p.3).

The Author's industry is energy, particularly oil; the rival chain is Gas, while substitutes are renewable, and the complimentary chains are engineering and drilling services. The detail of the Strategic arena map is shown in figure 2-9.

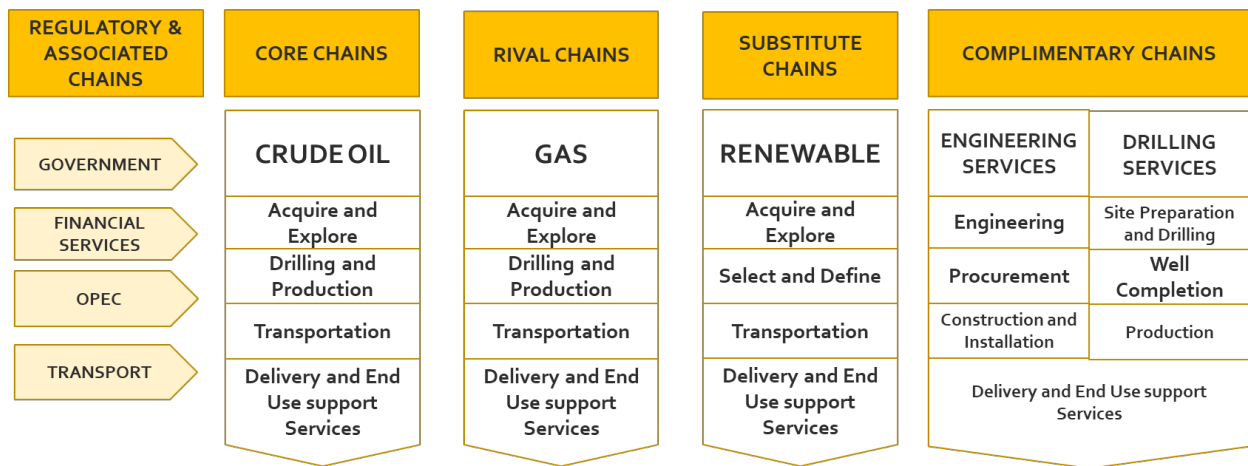


Figure 2-9: Strategic Arena Map

2.4.5.1 Regulatory and Associated Chain

The Role of Government on Petroleum Industry

Energy is essential for economic development. Therefore, nation-states and their societies have often taken a direct hand in developing and accessing energy products and services. In human history, however, there has been considerable debate about the proper role of governments in their energy sectors, just as there is debate about government intervention in national economies.

Many models for energy sector organisations currently exist worldwide. However, there is also a marked trend toward reducing government intervention and increasing “market-based solutions” for energy development, transportation, and distribution. By market-based solutions, we rely on the objective interactions between buyers and sellers, with price discovery, transparency, and minimal interference, to exchange energy goods and services

Governments must secure, manage, safeguard, and extract appropriate revenue from their natural resources for the future benefit of their citizens (Peter, 2015).

- Ministries and their National Oil Companies generally undertake this
- Governments may choose to have their NOC compete with or form a JV with the licence holders. In these instances, Governments need to have a regulator that is independent of the NOC to ensure:
 - Transparency
 - JV confidentialities are maintained.

- Regulation/performance monitoring is independent of parties with vested interests with the national interest at the forefront.
- Ensure appropriate contracts and guidelines for the IOCs are in place that will ensure good governance.

A Government's Responsibilities in the energy sector can be summarised into five categories (Canadian Audit and Accountability Foundation, 2016).

1. Evaluating oil and gas development options
2. Ensuring the responsible development of natural resources
3. Monitoring natural resource extraction
4. Collecting revenues from natural resource extraction
5. Collecting financial assurances for site remediation and monitoring financial liabilities

Financial Services

The financial services industry covers a broad spectrum of organizations managing financial resources. It comprises numerous financial institutions that serving to the public. Financial institutions include Banks, Savings and Loans Institutions, life and health insurers, property and casualty insurers, security brokers and dealers, private and state pension funds, and financial companies (Anastas, 2014).

Banks accept deposits and create credits through the intermediation between lenders and borrowers. They offer their customers numerous professional services such as dealing in securities, exchanging foreign currencies, providing corporate advice, arranging to lease, organizing international trade finance, and offering risk management services. The stock brokerage, an investment dealer in the securities of a firm which, among other things, liaises between buyers and sellers (institutional and retail investors) of securities to consummate investment transactions in both the primary and secondary financial markets, plays no mean role in the financial services industry (Anastas, 2014).

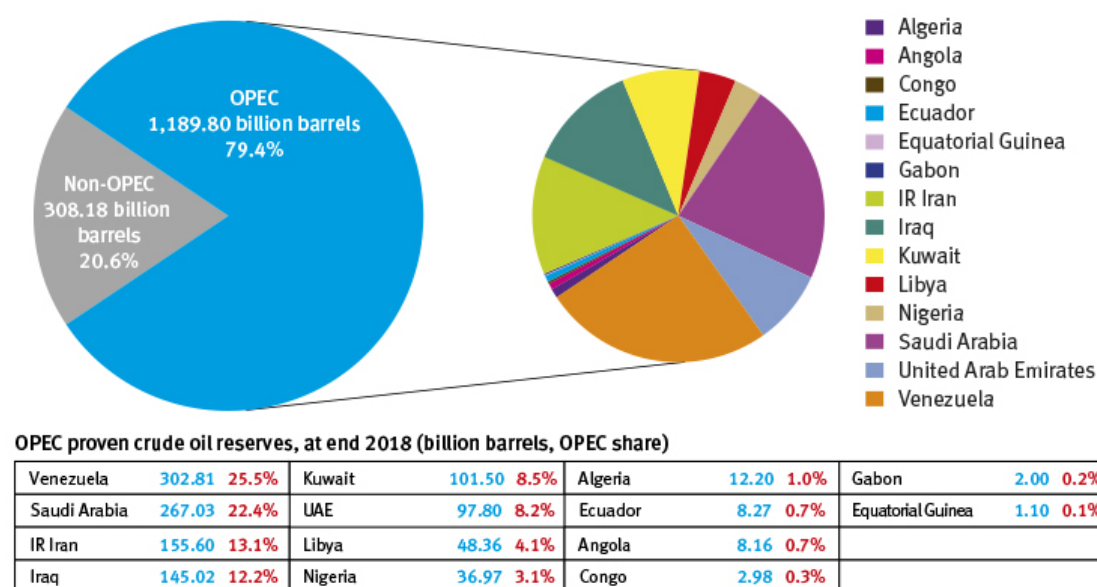
Financial risk management is also essential to all commercial investments, and the oil and gas sector is no exception. The risk management instrument, which includes insurance, reinsurance, and other risk transfer instruments, ensures the transfer or deflection of certain

kinds of risk away from investors and lenders, thereby minimizing the cost of financing projects, including oil and gas projects (Anastas, 2014).

OPEC

OPEC was created in 1960 based on principles that are as valid today as they were then — despite the vast number of changes that have been since experienced in technology, economics, politics, and many other aspects of our lives. OPEC's activities focus on oil, a commodity that has contributed more than any other form of energy to economic development worldwide over the past century and a half. OPEC's first goal is to keep prices stable. It wants to ensure its members get a reasonable price for their oil. OPEC's second goal is to reduce oil price volatility. OPEC's third goal is to adjust the world's oil supply in response to shortages (www.opec.org)

OPEC share of world crude oil reserves, 2018



Source: OPEC Annual Statistical Bulletin 2019.

Figure 2-10: OPEC Share of world Crude Oil Reserves

According to current estimates, 79.4% of the world's proven oil reserves are in OPEC Member Countries, with the bulk of OPEC oil reserves in the Middle East, amounting to 64.5% of the OPEC total.

OPEC Member Countries have made significant additions to their oil reserves in recent years, for example, by adopting best practices in the industry, realizing intensive explorations, and

enhancing recoveries. As a result, OPEC's proven oil reserves currently stand at 1,189.80 billion barrels(www.opec.org).



Source: *OPEC Basket Price*

Figure 2-11: OPEC Yearly Basket Price

The Figure 2-12 illustrates the inter-country variations in the average price of one litre of oil across G7 countries as well as the OECD average during 2018.

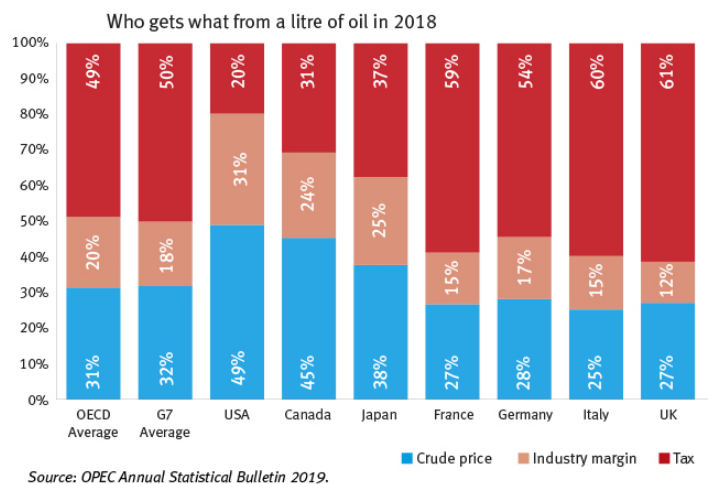


Figure 2-12: Inter-Country Variations in the Average Price

In the medium-term, about 160 projects, with an overall estimated cost of some \$156 billion, are being undertaken by OPEC Member Countries as shown in the figure below.

OPEC Upstream Investment Plans

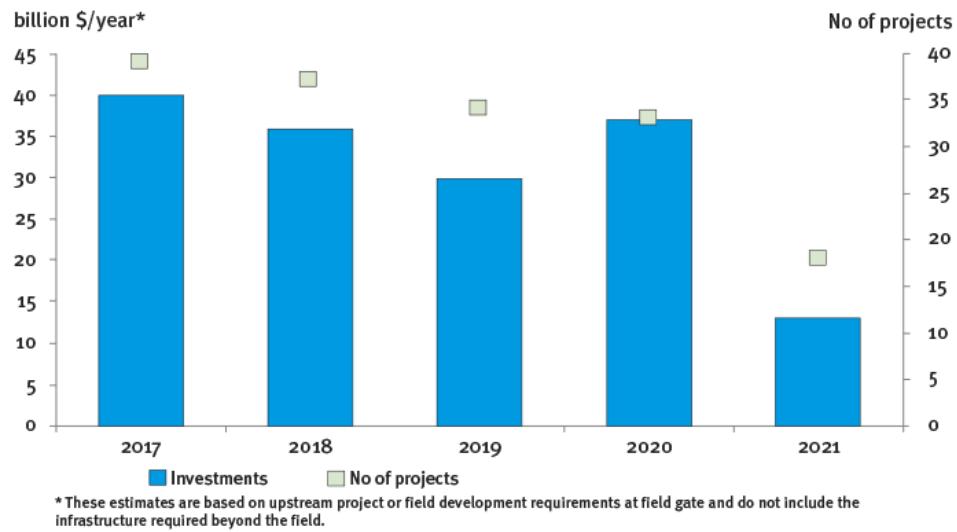


Figure 2-13: OPEC Upstream Investment Plans

The total estimated additions will bring OPEC Member Countries' base capacity to over 13.3 mb/d in 2021 and will require a level of investments of \$66.5 billion to implement the foreseen additions (distillation and secondary units) between 2016 and 2021 as shown in the figure 2-14.

Downstream capacity additions and investments in OPEC Member Countries

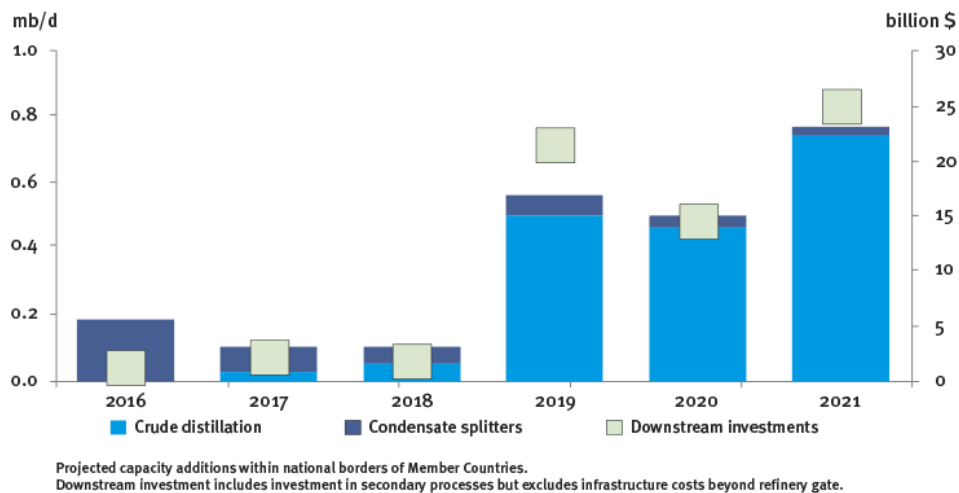


Figure 2-14: Inter-Country Variations in the Average Price

Transport

Transportation requirements in the oil & gas industry can be unique and complex, such as stringing services for line pipe delivery. Higher safety standards and the need for specialized equipment limit the base of qualified carriers, making it harder for suppliers to quickly and economically manage freight to project sites. Crude oil flows from the wellhead to the refinery using barges, tankers, overland, pipelines, trucks, and railroads. Gas is transported by pipelines or liquefied natural gas (LNG) tankers (IHS Global, 2013).

For this report, infrastructure refers to the physical assets starting at the production wellhead necessary to transport and convert produced hydrocarbons into semi-finished and finished products and deliver those products to market. Common asset sectors for oil and gas transportation are the following.

Pipelines include long-distance inter and intrastate transmission systems and local or regional gathering systems, which aggregate production for delivery into the standard carrier transmission systems (Svetlana, Anastasia, and Aleksander, 2019).

- **Pipelines** include long-distance inter and intrastate transmission systems and the local or regional gathering systems, which aggregate production for delivery into the standard carrier transmission systems.
- **Rail** infrastructure in additional railroad tank cars is used to transport increased liquid production, establish new routes, or enhance existing lines associated with delivering high hydrocarbon liquids.
- **Marine** infrastructure is vessels required to transport incremental production and specially designed marine loading and unloading facilities. The classes of marine vessels covered include tankers, oceangoing barges, and inland transport barges.
- **Processing & Storage** infrastructure is typically referred to as the Downstream sector and includes those facilities involved in the physical storage of hydrocarbons.

2.4.5.2 Core and Rival Chains - Oil and Gas

The upstream segment of the industry contains exploration activities, which include creating geological surveys and obtaining land rights, and production activities, which include onshore and offshore drilling (Håvard, 2013).

Crude oil is categorized using two qualities: Density and Sulphur content. Light and sweet crude oil is usually priced higher and, therefore, more sought-after because it is easier to

refine gasoline than heavy and sour crude oil. Oil volume is measured in barrels (bbl.), which equals 42 gallons.

Natural gas is found in associated formations, formed, and produced with the oil, and in non-associated reservoirs. Gas can either be dry (pure methane) or wet (exists with other hydrocarbons like butane). Although wet gas must be treated to remove the other hydrocarbons and condensates before it can be transported, it can increase producers' revenues because they can sell those removed products.

The logistics network in the industry is highly inflexible, which arises from the production capabilities of crude oil suppliers, long lead times, and the limitations of modes of transportation.

According to Christopher Chima (2007), "Supply chain management in a Petroleum industry is the configuration, coordination and continuous improvement of sequentially organized operations involved in upstream, midstream and downstream." So, the oil supply chain has three functional segments, namely the Upstream, Midstream, and Downstream (Figure 2-14).

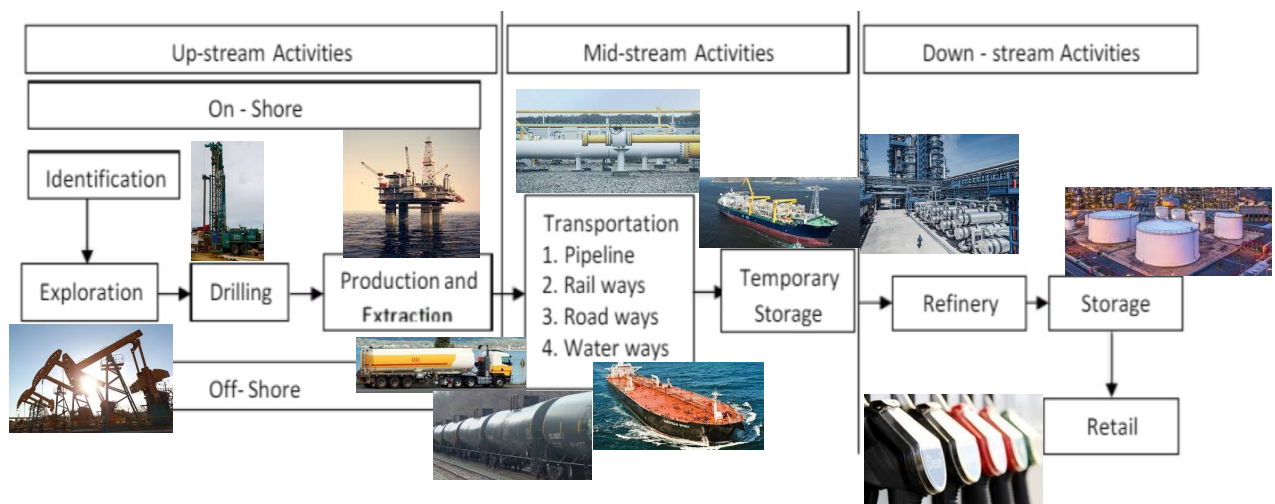


Figure 2-15: Upstream, Midstream, and Downstream

"Upstream" and "downstream" are the oil or gas company's locations in the supply chain. The closer to the end user a function or firm is, the further downstream it is said to be. Raw material extraction or production are elements of the supply chain known to be upstream. The upstream companies identify oil and natural gas deposits and extract these resources from underground. These firms are often called exploration and production companies. Those Refines are the downstream element of the oil and gas supply chain (Muhindo, 2014).

The upstream sector is referred to as the exploration and production (E&P) segment because it involves ventures related to exploring for, recovering, and producing crude oil and natural gas, and this also involves operations that identify reserves, drill wells, and recover raw materials from beneath the surface of the ground. This stream has the following activities involved.

- Exploration
- Appraisal Drilling
- Production and extraction
- De-commissioning and Rehabilitation

Oil and gas exploration includes the processes and methods for locating potential oil and gas drilling and extraction sites. When an exploration site is booming and extraction is productive, exploration costs are recovered and significantly less compared to other production costs.

Well, development occurs after exploration has located an economically recoverable field and involves the construction of one or more wells from the beginning (called spudding) to either abandonment if no hydrocarbons are found or to thriving completion if hydrocarbons are found in sufficient quantities (Håvard, 2013).

If the evaluation of the reserves and their volumes indicate a commercially viable location for development, preparations to produce oil and gas begin. The development includes the design and construction of oil and gas processing systems, pipelines, storage and offloading facilities, and the drilling of production wells.

The site is also assessed for liquefied natural gas (LNG) development when developing a giant gas field. LNG projects require the construction of large-scale liquefied plants and exporting facilities and therefore require the building and maintenance of long-term customer relationships. In extra-heavy oil developments such as oil sand projects, we may also build upgrade facilities to convert the yield from low-grade heavy oil to high-grade light oil.

Production is the process of extracting the hydrocarbons and separating the mixture of liquid hydrocarbons, gas, water, and solids, removing the constituents that are non-saleable, and selling the liquid hydrocarbons and gas. Production sites often handle crude oil from more than one sound. Oil is nearly always processed at a refinery; natural gas may be processed to remove impurities either in the field or at a natural gas processing plant (Håvard, 2013).

The upstream oil segment is all about wells: where to locate them; how deep and how far to drill them; and how to design, construct, operate and manage them to deliver the greatest possible return on investment with the lightest, safest, and smallest operational footprint.

Midstream involves infrastructure used in transporting crude oil and petroleum products. As its name implies, the midstream oil and gas segment encompasses facilities and processes that sit between the upstream and downstream oil and gas segments. Activities can include processing, storage, and transporting crude oil and natural gas (Håvard, 2013).

In most cases, oil and gas reserves are in different geographic locations of refining assets and significant consumption regions. Transportation is a big part of midstream activities and can include using pipelines, trucking fleets, tanker ships, and rail cars.

However, the focus of the midstream sector is the gathering system. Gathering systems are oil and natural gas storage areas where hydrocarbons from the oil are held until they can be transported to the refinery, where they are turned into marketable products (Svetlana, Anastasia, and Aleksander, 2019).

So, midstream activities include:

- Transportation
- Storage

Processing, transporting, and selling refined products made from crude oil is the business of the downstream segment of the oil and gas industry. The downstream industry provides thousands of products to end-user customers around the globe. Many products are familiar such as gasoline, diesel, jet fuel, heating oil, and asphalt for roads. Others like lubricants, synthetic rubber, plastics, fertilizers, and pesticides are less familiar.

The downstream segment is a margin business. Margin is defined as the difference between the price realized for the products produced from the crude oil and the cost of the crude delivered to the refinery. Downstream operations include refineries and marketing. These services turn crude oil into usable products such as gasoline, fuel oils, and petroleum-based products. Marketing services help move the finished products from energy companies to retailers or end users (Svetlana, Anastasia, and Aleksander, 2019).

Downstream activities include:

- Refining and processing of crude and gas

- Supply and trading
- Marketing and Distribution

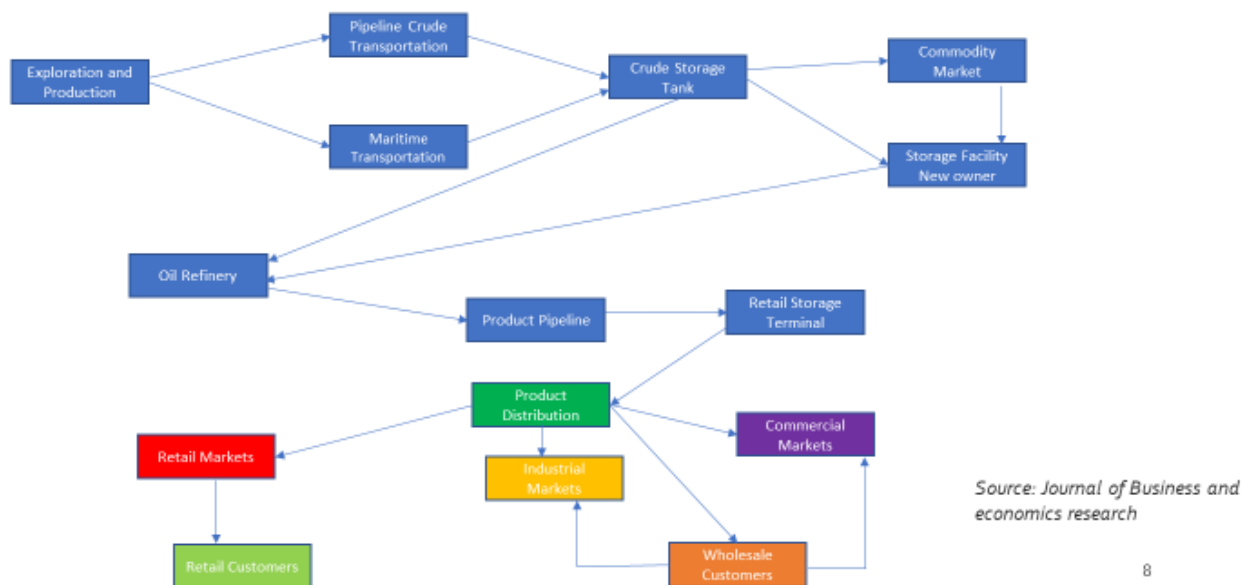


Figure 2-16: Basic supply chain flow related to oil and gas sector

In summary, as the hydrocarbon reaches the surface, it is further routed to the central production facility to separate the produced fluid into oil gas and water such that oil is free from dissolved gas and vice versa. Oil is transported to concerned refineries through pipelines, tankers, ships, rails, etc., and gas through a pipeline to consumers (Svetlana, Anastasia, and Aleksander, 2019).

2.4.5.3 Substitute Chain - Renewable Energy

Renewable resources are resources that are restored naturally with time. The use of these resources corresponds with sustainability principles. Renewable resources include solar energy, biofuels, cultivated plants, wind energy, geothermal energy, biomass, air, water, and soil.

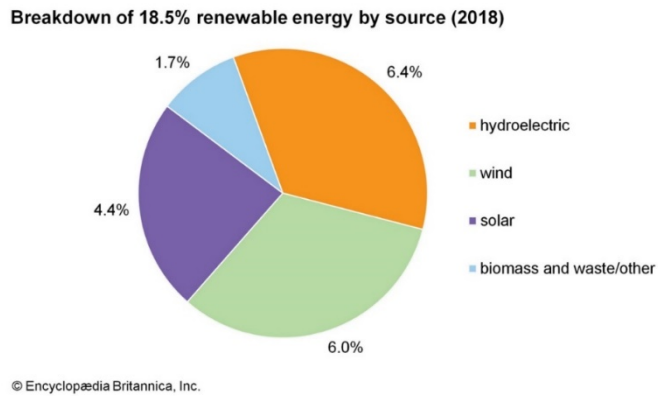


Figure 2-17: Renewable energy by source

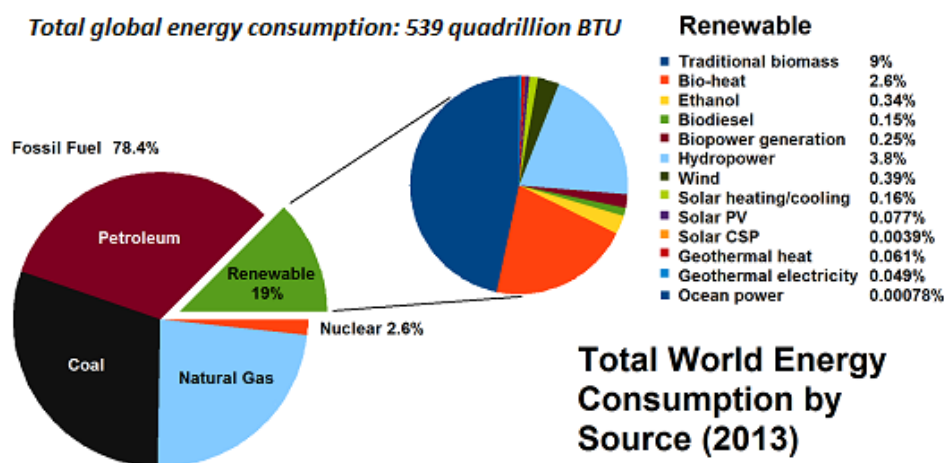


Figure 2-18: Total World Energy Consumption by Source

Advantages and disadvantages of renewable energy

Wind, geothermal, solar, hydro, and other renewable technologies are widely popular energy sources throughout the world today. Countries, corporations, and individuals are adopting renewables for several significant benefits. In this article, INTO will dive into some of the advantages and disadvantages of renewable energy (Kerry, 2018).

Advantages of renewable energy

- Renewable energy will not run out.
- Maintenance requirements are lower.
- Renewables save money.
- Renewable energy has numerous health and environmental benefits.
- Renewables lower reliance on foreign energy sources

Disadvantages of renewable energy

- Higher upfront cost
- Intermittency
- Storage capabilities
- Geographic limitations.

2.4.6 Resilience at the core for the Oil and Gas Industry

Organizations need to build resilience for the future and place it at the core of the strategy, addressing clever drivers of various market conditions to determine implications for industry dynamics. It also needs to build optionality to gain the flexibility to react quickly to the most recent market developments (i.e., invest or divest).

More importantly, building resilience requires the appropriate weighing of feasibility and risk against the organization's upside potential and risk tolerance. While designing corporate portfolios resiliently may come at a specific price, future strategies for businesses to maximize return on investment and minimize external interference from macroeconomic forces (Bart, 2020).

Bart (2020) proposes how the organization can be future proofed to achieve portfolio resilience. It states that it will begin with an evaluation of oil and gas industry trends and drivers – understanding the terrain of the oil and gas industry in the next few decades and identifying the main elements that can impact the future, for example, oil price shocks, political disputes, the energy transition, and pandemics.

Evaluating the direction of the oil and gas industry and providing records to evaluate the respective implications on, among others, development supply chains, capabilities and geographical footprint, market conditions and players, and investment plans further facilitates the understanding of strategic responses from consumers.

A zooming-in must then follow a broader lens perspective of the industry on the organization's internal portfolio to determine its burden and the exposure of its exploration, development, and production business units to the acute crisis impacting the business. The success rates of all portfolio components across scenarios must be appraised, and alliances between business units should be considered to recognize spill over effects and value-adding elements.

A forecast into the future can ultimately be determined by deciding on offerings obligatory for success and options effective in nature; offerings defined as “no-regrets” qualify as part of the everlasting portfolio. The figure 2.18 shows the details.

How to achieve portfolio resilience

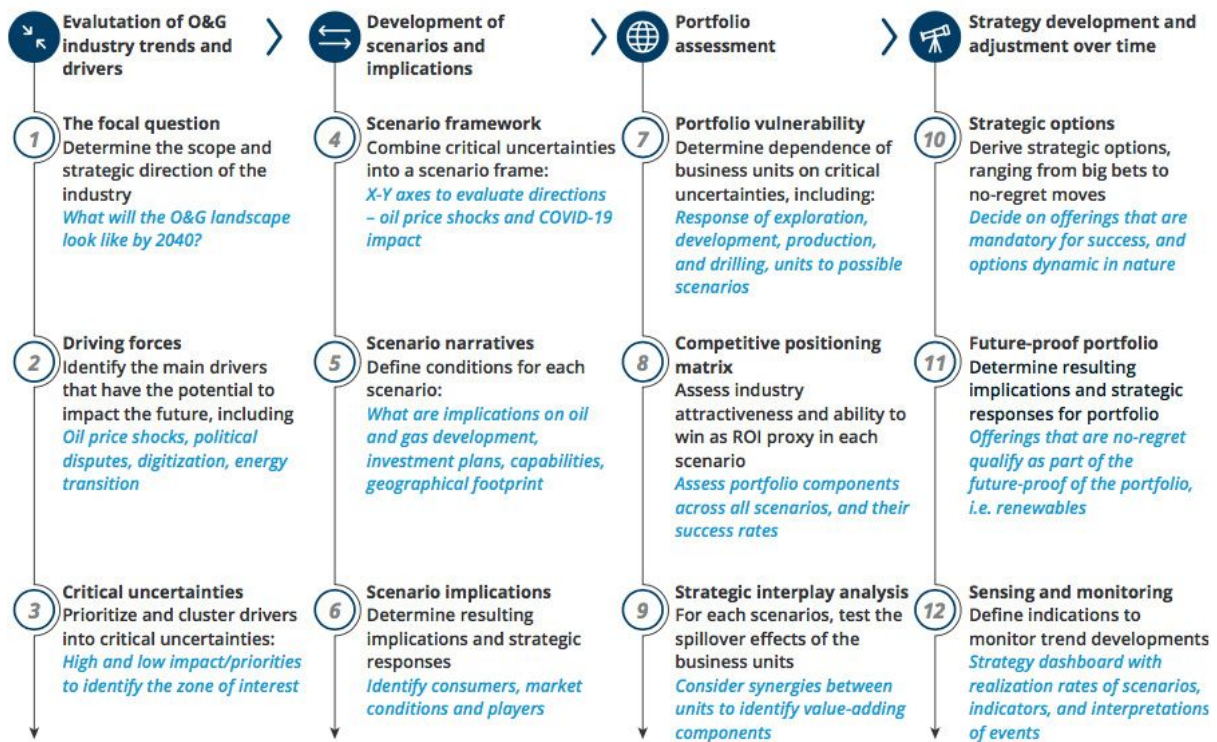


Figure 2-19: How to achieve Portfolio Resilience

(Source: Deloitte | A Middle East Point of View - Spring 2020)

2.4.7 Organizational resilience in the oil and gas industry

When organizations face challenges, perceived risks, and threats, resilience must begin with leaders responsible for their companies' outcomes. The essential qualities of resilient leadership differentiate successful leaders as they guide their enterprises through unforeseen events.

Executives should concurrently design from the heart and the head by empathizing with their staff, customers, and expansive ecosystems, yet interchangeably adopting a rational line to protect financial performance from disturbance. They should consistently be able to balance their organizations to meet the disruption at hand while finding opportunities amid complex constraints and painting a captivating picture of the future that inspires others to keep going.

Resilient leaders should concentrate on the longer-term horizon, anticipating the new business strategy that is likely to emerge and sparking the innovations of tomorrow.

It is possible to observe a concern with resilience in various fields of organizational research, such as individual and organizational psychology, supply chain management, strategic management, and safety engineering (Bhamra et al., 2011). As demonstrated by Denyer (2017, p. 8), research on organizational resilience has evolved over the last forty years, raising questions about the adaptive capacity of organizations to respond not only to internal failures but also to a variety of external challenges ranging from natural disasters to major socio-political trends. The increasing academic interest in organizational resilience has yet to derive from or lead to a consensus on what the concept Means.

Duchek's (2020) research on organizational resilience identifies three main categories of definitions: resilience as an outcome: resilience as a process, and resilience capabilities.

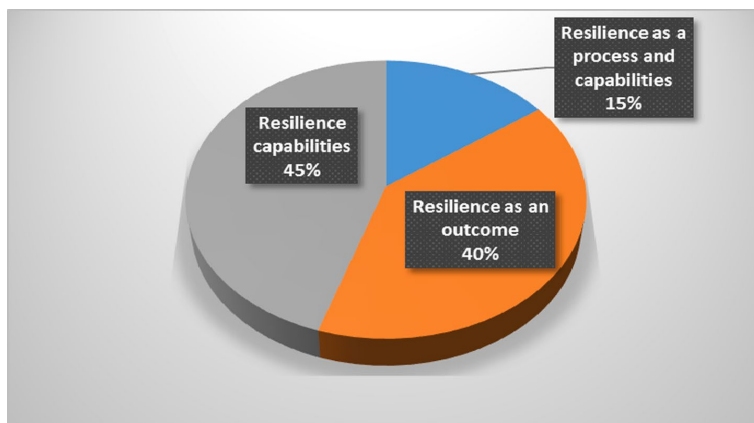


Figure 2-20: Share of articles in terms of conceptualization of resilience (Source: Bento et al., p7, 2021)

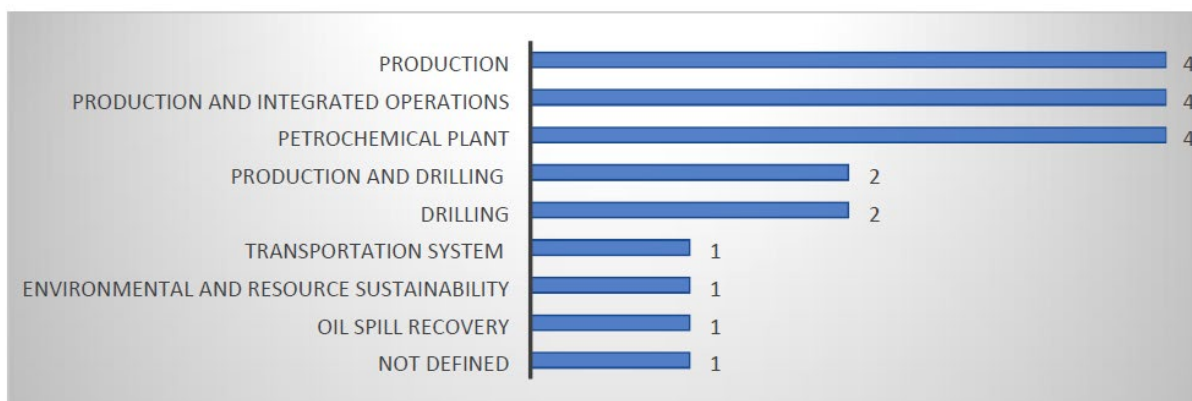


Figure 2-21: The quantity of articles addressing each context of resilience (Source: Bento et al., p8, 2021)

Business resilience is an organization's ability to adapt to an uncharted environment after or during any significant disruption, enabling them to survive and thrive in increasingly unfavourable conditions. Technology is challenging the old ways that any organization could

obtain resilience only at the cost of efficiency. The most progressive approaches offer innovative solutions for running scenarios, monitoring many suppliers' network layers, accelerating response times, and even changing production economics. Proper technology guarantees maintaining revenue streams, increasing sustainability, and bringing organizations closer to their customers.

This will dive into significant shifts and opportunities to better understand the oil and gas industry's future. Doing so will help industry leaders make the right decisions and build a solid foundation for business resilience.

2.5 Leadership Tools

Leaders have used these tools in leading organizations and various projects in the context of solution and strategy development. These tools benefit the oil and gas industry because they provide a structure within which it may develop an appropriate solution and strategy, as opposed to the ad hoc problem-solving approach generally adopted by the industry. Thus, such a structured model may make the solution or strategy development activity more effective by adopting a more organized, considered, and analytical process.

2.5.1 PESTLE Analysis Framework

This framework is used to analyse critical factors, which are political, economic, sociological, technological, legal, and environmental. These are essential factors that affect business decision-making. The political component includes the political framework, business composition and tax structures. It is used to gauge the political stability of an area to foster trade (Tan et al., 2012, p.1). The economic component includes the gross domestic product, household disposable income, unemployment, retail sales levels, spending levels and threats within the economy that would hurt the economy (Tan et al., 2012, p.2). The sociological component includes the social and cultural changes that are occurring within the country (Ivancevish, Konopaske, & Matteson, 2010, p.331). The technological component includes new technologies and methodologies which create new markets (Perera, 2018, p.12).

The legal component includes the legal standards and laws a business must comply with whilst also identifying the most advantageous business models an organisation may adopt based on the jurisdiction's legal requirements. The environmental component includes the impact resources, or lack of resources have; the location of ports and the infrastructure used to transport goods; the distances between ports and warehouses or factories; and the effects weather may have on a business (Hall, 2011, p.1).

2.5.2 SWOT Analysis Framework

SWOT is a mechanism that allows a business to analyse its processes to determine the entity's efficiency (Staff, 2019, p.2). It is generally used as part of the planning process, allowing the entity to identify, and overcome challenges and pursue new opportunities (Borucka, 2018, p. 635). It also allows an entity to explore new initiatives, overhaul internal policies, and identify opportunities to pivot or alter a plan midway through its execution (Staff, 2019, p.2). SWOT is an analysis framework that involves creating a table divided into four sections. Each section has a specific title: strengths, weaknesses, opportunities, and threats. The strengths and weakness' themes are internal to the entity. The two remaining themes, opportunity, and threat are external to the entity. This table can be used to analyse any specific aspect of the entity and encourage the members of the entity to become familiar with 'every detail' of the organization (Villegas, 2017, p. 9).

2.6 Gaps in the Resilience Literature

A few gaps and areas for further study exist across the literature; this study focuses on where those gaps exist and provide an opportunity for further research. The first gap relates to how an organization can foster resiliency. Further research is needed to determine at what point in a person's development timeline resilience should be added. Gaining additional clarity on this timeline will add to the research on resilience and leadership development. Concerning measuring one's resilience, companies and leaders have been challenged to provide a quantifiable measurement that enables a factual investigation of the resilience domain, especially within and across teams (Sharma & Sharma, 2013). The second area is related to an individual's personal character development and resiliency. The concept posited is: Does an individual's early childhood environment, life experiences, or life challenges build resilience? A deeper understanding is needed to see if specific experiences enable greater agility in developing this capacity in a professional work setting. Also, one study by Bonanno et al. (2007) suggested that a gender variable exists in overall resiliency. In this study, the female gender was related to a reduced likelihood of resilience about the impact and reaction to a crisis (Bonanno et al., 2007, p. 678). Additional research needs to be conducted to see the true scope of the factors behind gender diversity and one's resiliency and reaction to the crisis.

The third gap relates to resiliency models and how they can be sustainably incorporated into development activities. The long-term impact of the development activity is the primary gap in the studies. Do these activities have an enduring effect over time? The research is limited,

and most authors point this out as an opportunity for further research. In addition to sustainability is a need for research on the recovery phase once the crisis or disruption has ended (Darkow, 2018).

Regarding HardiTraining, it is essential to note that the study only measured hardiness in the short term. Future research should include a more extended measure of how the participants sustain during organizational disruptions (Britt et al., 2016). In terms of hardiness and its relationship to stress management through genetics, further study should be conducted to identify the connection between neuropeptide Y (NPY) and the genetic predetermination of resiliency. Reichmann and Holzer (2016) explore that the stress resilience properties of NPY have interrelated personality characteristics—challenge, commitment, and control—that appear to protect an individual from the health effects of stress. Wood and Bhatnagar (2015) posited that NPY demonstrates neuroendocrine control over stress susceptibility.

Given that NPY is widely distributed throughout the brain, it is poised to impact stress-related behaviours (Wood & Bhatnagar, 2015). This interrelationship should be further investigated to identify the genetic influence NPY has on the reduction of stress and the increase in resiliency. Each of these gaps offers an opportunity to conduct further research and potentially offer additional academic contributions to the body of work on resilience and leadership development.

2.7 Conclusion

Researchers posit that resilience is critical for leaders today, both those in management positions and those holding individual contributor roles. The study did not investigate empirical evidence to show that resilience is not a critical factor in either individual, team, or organizational development. What is clear from the literature review is that this is a topic many organizations are interested in, and that further research needs to be conducted, both from a scholar and practitioner viewpoint. Disruption and crisis are inevitable, and no company is excluded from their effect. Executive leaders should begin to prepare their team and individuals now to build them to know how to respond to disruption or crisis arrives. The oil and gas industry are an industry that needs to develop its leaders with a focus on business acumen, diagnostics, corporate strategy, and coaching best practices. The opportunity exists to conduct rigorous qualitative research to identify behaviours and characteristics of resilience in current leaders and evaluate if the practices of resilience should be integrated

into oil and gas leadership development programs for both the success of the individual and the oil and gas industry.

CHAPTER 3: RESEARCH DESIGN & METHODS

The methodological approach for this study is qualitative. The data for the study were collected within the oil and gas industry.

An inductive qualitative research methodology followed the research design in which interviews were conducted and all relevant documents were reviewed. I am the senior director of learning and development; I have worked for the oil and gas organization for over 20 years. In my current role, I am the Chief Executive Officer of FEDDO GROUP, a global oil and gas engineering company and the Global Leader in Subsea and Pipelines System. In this position, I do not have direct management responsibilities for any of the participants I interviewed.

The following section lays out the conceptual framework, participant selection, data collection, analysis, and potential concerns for the research.

This chapter outlines the research questions, details the research methodology, and provides the rationale behind that methodology. I will share who made up the population of the individuals I interviewed and how the data was collected and analysed. The chapter explores validity concerns and the methods with which those concerns were mitigated. The research questions are the following:

1. How do leaders demonstrate resiliency in the Oil and Gas Industry at the executive level?
 - d. In day-to-day functions?
 - e. During Oil and Gas Price Crisis and Covid-19 pandemic crisis events?
 - f. How has this changed over time?
2. What are the specific behaviours and characteristics of resilient leaders at Oil and Gas Industry at the executive level of leadership?
 - d. In day-to-day functions?
 - e. During Oil and Gas Price Crisis and Covid-19 pandemic crisis events?
 - f. How has this changed over time?
3. How can emerging technology enable resilience in oil/gas leaders to optimize the industry?
4. What influences/shapes different forms of resilience in Oil and Gas Industry leadership?

5. What techniques and learning practices can proactively cultivate resilience in the future of the Oil and Gas Industry's leaders at the executive level of leadership before an organizational crisis or disruptive event occurs?
6. How can leaders move faster towards digital transformation in terms of digital investments and potentially rethink the technical architecture and the ability to utilise an extended network of digital solutions that may provide a more resilient infrastructure?

3.1 Participant Selection

The population selected for this study was from executive leadership in the oil and gas industry. This is a blend of those in leadership positions during the oil and gas price crisis from 2015–2017 and the COVID-19 pandemic crisis of 2020. It is essential to note that not all of the participants in this study were in not executive leadership positions during the oil and gas price crisis from 2015–2017. However, all participants were in leadership positions during the COVID-19 pandemic. The study included 15 participants representing executive leadership levels in the oil and gas industry. There are a total of Ten (10) males and five (5) females who participated in the study and shown below in Table 3-1.

Level	Male	Female	Total
Executive	10	5	15

Table 3-1: Participant Level and Gender Breakdown

The purpose of selecting executive levels of leadership in the oil and gas industry was to understand the unique, diverse, or similar perspectives of those individuals responsible for other people at executive levels of leadership during all three disruptive events. My goal as a researcher was to understand if different or similar behaviours and characteristics of resilience emerged at each leadership level. The demographic span of the oil and gas industry included the United States, Nigeria, the United Kingdom, Canada, Malaysia, UAE, and Singapore.

Eleven participants provided insight and perspective on the oil and gas crisis of 2015–2017. In the case of the COVID-19 pandemic crisis, all 15 participants shared their insights and perspectives in this study.

Participant identity has been anonymized to protect the personal information gathered during the interview. Participants are identified by their hierarchy in the organization with the

following coding: Executive is identified as the letter E, followed by a number. Each number represents the order in which each participant was interviewed. For example, E1 = executive and the first person interviewed. All interviews were conducted virtually over Zoom Platform software.

As in all research studies, there are limitations to the research being conducted. For this study specifically, one of the limitations is the period that has passed since the oil and gas price crisis. However, there was a sharp drop in oil and gas prices during the height of the Pandemic, and they rebounded immediately. Based on this, serious attention to the building of each interview question was required to set the stage for the impression of each participant interviewed. An additional limitation is me as a researcher, considering I was also in a leadership role within the oil and gas industry during all two events. My position has the potential to be both a limitation and a benefit, given my role in the organization at the time between the oil and gas crisis of 2015–2017 and the most recent crisis with the COVID-19 Pandemic.

3.2 Data Collection

I conducted qualitative interviews with each of the participants outlined above. Specifically, I used the framework shared in “Table 5.1 Considerations for Developing and Conducting Interviews” (Ravitch & Carl, 2016, p. 151). The eight characteristics outlined by Ravitch and Carl (2016) are “relational, contextual/contextualized, nonevaluative, person-centred, temporal, partial, subjective, and nonneutral” (pp. 148–150). As the researcher, it is essential to articulate precisely how each of the characteristics above has supported the development of the interview protocol as well as the considerations of all the eight characteristics Ravitch and Carl (2016) outlined.

1. Relational

Each interview I conducted was built from trust and mutual respect. Given that the research took place in my industry with people I know, keeping a reciprocal and trustworthy environment throughout the interview was vital to the success of the research and the longevity of trust after the interview concluded. Considerations for this characteristic for me as the researcher are how I ensured their anonymity as participants and the safekeeping of the information they shared with me.

2. Contextual/Contextualized

Specific questions and sub-questions were developed to avoid generalized answers. This is especially critical because the events being referenced were both in the oil and gas price crisis and present with the COVID-19 crisis. The potential existed for the participants to interpret their experiences differently now than they did in previous years. Given this, a key consideration I took regarded probing for specific information that is relevant and contextualized for the specific behavioural reaction that took place at that moment in time, both in the past and the present. The structure of my interview questions enabled my participants to recall and contextualize their actions and behaviours from both past and present events.

3. Nonevaluative

Considering that I, as the researcher, work for the industry in which my participants work, I needed to be always conscious of researcher bias. Specifically, as it relates to micro-expressions, such as affirming body language and facial expressions, holding myself accountable and actively reflecting on my behaviour throughout each interview was required. One way I raised awareness was by conducting several practice interviews with several friends and family members before conducting the actual interviews. I asked for feedback and recorded the practice interviews to address researcher bias by recognizing the signs ahead of time.

4. Person-Centred

I needed to ensure each participant was cared for throughout the interview; this was necessary for me as the researcher. Although I do not believe the type of research I conducted triggered emotional distress, situational awareness was required to recognize the potential for distress and discontinue the interview process when appropriate. At no point in the interviews did I have to stop the interview. Good attention was given to each participant from the beginning. I requested permission to record the interview. I ensured their identity would be anonymous by explaining how their stored data when was to be deleted and how I would identify them when I reported my findings. These simple actions were taken to care for each of my participants.

5. Temporal

Temporal considerations were high for these qualitative interviews. Putting the participant back in time and asking for their reflection on events and reactions to them required careful

and thorough planning. Each participant interviewed was in a different geography during those prior events. The experience gained just from the time passed was critical to recognize; it could influence the participants' responses. Ensuring I captured the context accurately from each of the participants with temporal consideration was critical.

6. Partial

Recognizing that the interview was a snapshot of the overall experience was an important consideration. Regardless of how sincere the participants' answers were, they were still only a picture. Given this consideration, I needed to structure the research to further investigate for information and examples of the participants' experiences. Careful development of sub-questions supported further probing of participant experiences.

7. Subjective

Understanding the relationship between my subjectivity and its intersection with the participants' subjectivity was an important consideration. This is especially true because I worked in the same organization as the participants and led teams during all three events under examination. Accounting for these intersections of subjectivity between researcher and participant was an essential aspect of both the construct of the interview protocol and how the data I collected was interpreted.

8. Nonneutral

I was required to recognize the underlying biases and assumptions of both myself as a researcher and the participants. As the researcher, recognizing the multidimensional environment of both the participants and me was essential to keep in context. Specifically, being aware of my micro-expressions and reactions to each participant's answers was important. As the researcher, it was essential to recognize these in me and reduce them actively. The duration of each interview was between 60 and 90 minutes and consisted of using the video feature in the Zoom Platform. The nature of the questions assisted in identifying demonstrated characteristics and behaviours of resiliency during day-to-day functions, times of disruption, and if these behaviours have evolved. The semi-structured interview format was used, and open-ended questions were utilized to enable each participant to remember and share their observations, experiences, and ideas in an open format. The interview protocol is attached in the appendix section of this critique, and I encourage the reader to read it. The main aim of this structure was to limit my influence as a researcher by

enabling each participant to illustrate their thoughts in their own words versus answering a series of earnest, structured questions that could prevent the participant from diverting during the interview. Before engaging in participant interviewing, I conducted several pilot interviews with non-participant members to assess the flow of the interview protocol and the structure of each question. This enabled further refinement and editing of the interview questions before starting the qualitative research. Lastly, to increase the study's validity, I conducted member check-ins throughout the interview process. I summarized sections of the interview with each participant throughout the interview and offered to share a copy of the transcribed interview data with those willing participants. The intention was to ensure accuracy and confirm participant objectives throughout the interview, thus making the best use of participant credibility and the study's validity.

3.3 Data Analysis

Ravitch and Carl's (2016) approach to collecting qualitative data was used for the collection and analysis methodology. For data analysis and processing, I followed Ravitch and Carl's (2016) three-pronged approach to qualitative data analysis: data organization and management, immersive engagement, and writing representation to conduct a rigorous data review. Throughout the collection process, I structured the data organization as an iterative process, actively writing and rewriting my findings (Ravitch & Carl, 2016).

3.3.1 Data organization and management

I stored the files on a secure Microsoft OneDrive storage location. My system firewall and security measures protect this location. An encrypted cloud storage application backed up the data through google drive. I used a simple naming system, such as "Executive Interview 1" and "E1," which describes an interview with an executive who was the first person interviewed. I use this nomenclature for easy tracking and recall throughout the coding and thematic analysis.

The primary research method for collecting data was using an interview protocol. As such, transcription services were conducted through zoom transcription. The data is secure and guaranteed safe by the service provider with a high degree of transcription accuracy. The executive leader levels structured the precoding of the data for all two events under examination. The data were further coded by the interview date, followed by the participant's level. This structure enabled a productive and secure method of review and retrieval throughout the analysis process (Ravitch & Carl, 2016).

3.3.2 Immersive engagement

This was supported by a comprehensive review of the data collected. The analysis underwent multiple iterative reviews to ensure rigour was applied to all potential findings. As each interview transcription returned from Zoom, the review process began. Throughout the coding process, themes, subthemes, and unequivocal evidence were identified and cross-examined to assess validity by reviewing additional readings and research on the findings. Identification of gaps and counter-positioning was documented and examined (Ravitch & Carl, 2016).

3.3.3 Writing and representation

It was an ongoing, iterative process throughout the collection and analysis effort. After the data was collected, transcribed, coded, and examined, and I wrote iterative evaluations of my findings and interpretations of what the data was stating. The findings were represented and discussed in written form. When appropriate, I utilized visualization to represent my findings in a compelling format. I carefully documented my awareness of researcher bias and had careful planning and dialogic engagement sessions with my Chair throughout this process. (Ravitch & Carl, 2016).

3.3.4 Coding and thematic analysis

The interview data was collected, transcribed, and examined from all 15 participants. The process used for creating codes utilized the framework outlined by Saldaña (2015) in establishing first and second cycle coding. Saldana's structure brought additional depth to the coding process. It enabled the first cycle of codes to be recorded and further exploration into the longitudinal changes over time with my participants' experiences (Saldaña, 2015). In addition to Saldaña's two-cycle coding methodology, I also utilized Boyatzis's (1998) three-stage framework for conducting thematic analysis and establishing themes, subthemes, and codes. Stage I determines sampling and design methodology; Stage II is creating themes and corresponding codes; and Stage III is validating and using established codes (Boyatzis, 1998). The intention of utilizing this framework and methodology was to conduct a convergent thematic analysis (Boyatzis, 1998). The purpose of applying these practices was to use the established codes to categorize my data into different segments based on the research questions. Utilizing this methodology enabled me to interpret the data both individually and holistically.

3.3.5 Validity Concerns and Mitigation Plans

There is always the risk of validity threats, specifically bias and reactivity, as outlined by Maxwell (2013). Given my subjectivity as the researcher, it was dutiful to understand that my biases exist and explain my potential biases in my research proposal and dissertation (Maxwell, 2013). In addition to the health effects of stress (Reichmann & Holzer, 2016). Wood and Bhatnagar (2015) posit that NPY is another demonstration of neuroendocrine control over stress susceptibility. Given that NPY is widely distributed throughout the brain, it is poised to impact stress-related behaviours (Wood & Bhatnagar, 2015). This interrelationship should be further researched to determine the genetic impact that NPY has on the increase in resiliency and stress reduction. Each of these gaps offers an opportunity to conduct further research and potentially offer additional academic contributions to the body of work on resilience and leadership development. Throughout the immersive engagement process, validity checks to the findings of genetics established in advance of resiliency may prove to be difficult.

3.4 Assumptions

There are several assumptions I made as a researcher, the first being that through a qualitative study, I would be able to identify behaviours and characteristics of resilience in current leaders who work in the oil and gas industry and led teams through the oil and gas price crisis of 2015–2017 and the current COVID-19 pandemic crisis. The second assumption is that after identifying specific behaviours and characteristics of resilience in these leaders, the learning and development team can teach resilience as a part of its leadership development program. The last assumption is that building resilience to develop leaders before an organizational crisis or change event will better prepare those leaders to bounce back with strength and resolve while suffering limited dysfunction or loss of momentum.

3.5 Potential Problems

This study's potential for problems existed as it does in any dissertation study. For this study, one concern was researcher bias. Because I am an executive in the industry where I conducted my study, this inherently created a risk for bias. I dealt with this matter by knowing that this bias existed from the start of the research. Mitigation planning, completed before the participant interviews, was essential to address bias concerns.

A second potential problem was the time that has passed since two of the events being studied, specifically the oil and gas price crisis of 2015–2017 and the Covid-19 Pandemic

crisis in 2020-2021. Would the participants clearly remember the events and the specific actions they took to lead their teams through these times? As a result, rigour was applied to structuring the interview protocol to avoid hypothetical scenarios and close-ended questions.

Considerations of participant availability required a carefully planned approach for when the interviews could take place, and a secondary/backup participant list was required to ensure the participant pool was sufficient. What surprised me as the researcher was the overwhelming response and willingness of the participants to engage and participate in the study actively. A rigorous timeline was established to conduct all 15 interviews between Feb 10 and June 20, 2022.

3.6 Conclusion

The purpose of Chapter 4 was to share the research plan I established and the methods I used to seek the answers to my research questions. As discussed, I collected participant data by conducting qualitative, semi-structured interviews to determine how resiliency was demonstrated by leaders in the oil and gas industry at the executive level. The research looked at this through the lens of day-to-day functions during the Oil and Gas Price Crisis and Covid-19 pandemic crisis events and how it has changed for the participants over time. The research also seeks to identify the specific behaviours and characteristics of resilient leaders at the executive level of leadership in day-to-day functions, during disruptive and crisis events, and how this has changed for the participant over time. Finally, the research will seek to understand what influences and shapes different forms of resilience in Oil and Gas Industry leaders and what techniques and learning practices can proactively cultivate resilience in the future of leaders prior to an organizational crisis or disruptive event in the future.

Chapter 4 will present this study's findings and answer the established research questions. Chapter 5 will explore the evolution of my PCLP, while Chapter 6 will follow the research questions sequentially when sharing participant findings.

CHAPTER 4: RESEARCH ANALYSIS AND REFLECTIONS

This chapter aims to report the results of the qualitative data collected in this study. This chapter seeks to answer the research questions set forth at this study's genesis and to capture the emotions and lived experiences of all the professionals who favourably gave me their time and shared their personal and professional experiences at a time of disruption and crisis. The chapter does not include interpretation or further data analysis, which will be reviewed in Chapter 6.

4.1 Personal Response to the Data

Before I review the overall results, the following is my response to the data. Before my interviews, my Dissertation supervisor, Prof. Khimji, suggested that I be interviewed using the same interview protocol my participants responded to, given my position as a leading organization member during a crisis. Throughout the time conducting the participant interviews, I was interviewed three times: First, at the onset of the study and prior to the first participant interview; second, at the midway point of the interviews; and third and final time after all the interviews had been completed. I greatly appreciate this suggestion, as it was helpful and generative in many ways throughout the process. Although my responses are not included in the data set and corresponding thematic analysis, it helped ensure the quality of my interviews. It helped maintain my attention to researcher bias through how I reflected on and answered the questions.

The interviews took place between February to June 2022, as the interview process began, I was emotionally struck by the overwhelmingly positive response from the participants I had invited to participate in this study. Regardless of the industry's hierarchy, each executive met my request openly and earnestly to engage in the research and interview process.

As I reviewed the transcripts verbatim, listened again to the interviews, and read and organized the data by an interview question, I could not help but feel the depth and breadth of experiences my colleagues were sharing with me. The participants' lived and, at times, shared experiences throughout their lives and careers unexpectedly impacted me emotionally. I will always be grateful for each of them and their contributions to this research.

4.2 Types of Data Analysis

In this research, as described in Chapter 4. I followed Saldaña's (2015) first cycle and second-cycle coding methods to identify themes and subthemes throughout the data for the

inductive thematic analysis. In addition, I followed Boyatzis's (1998) method of conducting thematic analysis as outlined in Chapter 4.

4.3 Introduction to Results

The research study consisted of 15 open-ended behavioural-style questions administered to 15 participants. Interviews were conducted between Feb and June 2022.

The participants who contributed to this research represented executives and comprised men and women from executive levels of leadership in the oil and gas industry. Table 2 outlines each research question (RQ) with the corresponding number of interview questions (IQ) contributing to responses for each research question. The interview protocol is attached in the appendix section of the critique.

Research Question	Number of Interview Questions Contributing to Response	Interview question Contributing to the Response
1	11	1, 2a, 2b, 4a, 4b, 5a, 5b, 5c, 6a, 6b, 10
2	11	1, 2a, 2b, 4a, 4b, 5a, 5b, 5c, 6a, 6b, 10
3	3	8,9,10
4	7	2a, 2b, 6b, 6c, 7, 8, 10
5	3	7,8,10
6	3	8,9,10

Table 4-1: RQ/IQ Support

Before sharing the results of this study, it is essential to first set the stage for how I defined critical elements of my research questions. In research question one, I asked how executive leaders demonstrated resiliency. This action-based question sought to identify specific actions leaders in the oil and gas industry took that could be identified as resilient.

In research question two, I asked what specific resilient behaviours and characteristics of oil and gas industry leaders are. This question sought to identify attributes associated with my participants' behaviours and characteristics. In research question four, I asked how the use of

emerging technology can enable resilience in oil/gas leaders to optimize the industry. This question sought to identify whether my participants are familiar with recent technology that can be a crucial enabler of resilience.

In research question four, I asked what influences and shapes different forms of resilience in the oil and gas industry leadership. The question sought to recognize experiences that influenced various forms of resilience. In addition, the question sought to understand the participant's perspectives about what they believed influenced and shaped resilience, not only in themselves but also in others. This question sought to identify the influencers of different forms of resilience. In question five, I asked what techniques and learning practices could proactively cultivate resilience in the next generation of Hilti leaders. The fifth question sought to identify the potential output to develop tools to build resilience in the next group of leaders in the oil and gas industry. I was interested in learning from the participants their experiences of how they have developed their resilience through personal development or specific training. Finally, the last question was how leaders could move faster towards digital transformation, in terms of digital investments and potentially rethink the technical architecture, the ability to draw on an extended network of a digital solution that may provide a more resilient infrastructure; my reason for this question was to know how the industry and the leaders are driving the investment on the journey towards digital transformation. Framing each of these questions in the context of actions, influencers, attributes, and outputs are the lenses from which the thematic analysis is elaborated below.

4.4 Summary of Themes

The thematic analysis identified 11 themes and 56 subthemes across 1,278 data points. This section briefly explains each of the primary themes and their corresponding subthemes that make up the totality of the research. These described summaries will be tied to each research question where appropriate. These will be described under each question and interpreted in Chapter 6.

The following themes appear throughout the collected data and, as such, need to be in order. The summary of all the themes identified in the six research questions posed by this study is shown below.

- **Overcoming Personal Crisis**
 - Health Crisis
 - Lost Relationship
 - Economic changes
 - Family disruption
- **Leaving Home**
 - Role to New Country
 - Working Abroad
 - During COVID-19
 - Cultural Differences
 - Separation from Family
- **Managing Change**
 - Headcount Changes
 - Restructuring
 - Career Progression
 - Managing Struggling
 - Business Decision Making
- **Managing Feedback**
 - Difficult Feedback
 - Client Feedback
 - Partner Feedback
 - Employee Feedback
- **Resilience Shapers**
 - Experience
 - Failure
 - Upbringing
 - Culture
 - Suffering
 - Vulnerability
- **Emotional Intelligence**
 - Self-Awareness
 - Self-Management
 - Social Awareness
 - Relationship Management
- **Leader Communication**
 - Clear
 - Calm
 - Absence of Panic
 - Transparent
 - Inspiration
 - Visionary
- **Continuous Learning**
 - Failure
 - Reading
 - Webinars
 - Training
 - Workshop
- **Adjusting Leadership Style**
 - Directive
 - More Personal
 - Coaching
 - Situational
 - Focus
 - Empowering
 - Seeking Feedback
- **Mindsets**
 - Authenticity
 - Transparent
 - Determination
 - Perspective
 - Gratitude
- **Organization**
 - List Making
 - Note Taking
 - Communication
 - Living the Culture
 - Understanding the Business

1. Overcoming Personal Crisis

In response to several questions asked in the interview protocol about the participants' experiences with a significant personal challenge, many participants shared stories about overcoming a personal health crisis or discussing the loss of a relationship.

This theme connects to the literature in Chapter 3, where Britt et al. (2016) refer to the common theme of showing positive growth from a stressful event to be considered resilient.

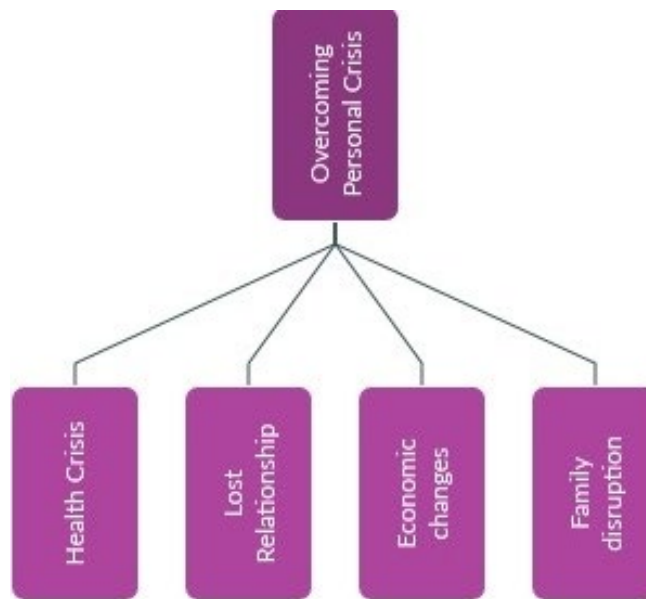


Figure 4-1: Overcoming Personal Crisis Sub-themes

2. Leaving Home

Most of the participants have worked globally in various roles in their career lives. Ten participants had either worked abroad or relocated to other nations while working in the oil and gas industry. These participants shared stories about their experiences in the following subthemes: relocating to a new country and the emotional experience of working abroad during the COVID-19 pandemic when they were unable to return to their countries of the resident to be with family. The research by Britt et. (2016) supports that how an individual comes out of a stressful event, in this case, relocating or being separated from family, can be an indicator of resilience.

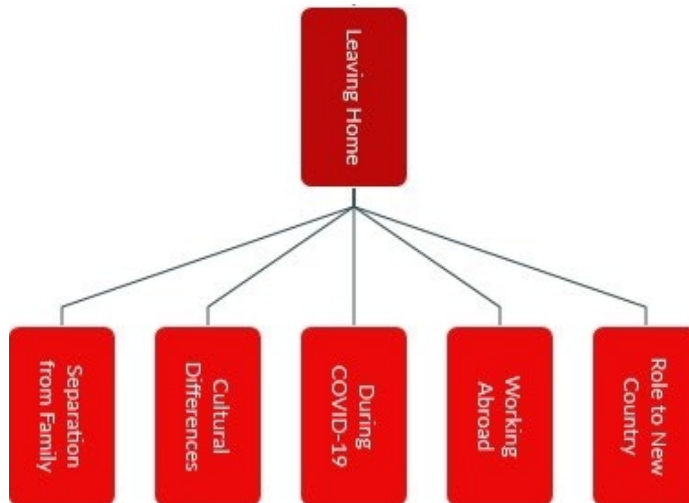


Figure 4-2: Leaving Home Sub-themes

3. Managing Change

Many participants shared their experiences managing professional change throughout their careers, during disruption, crisis, and day-to-day work. The subthemes identified throughout the interviews were managing changes in headcount, various restructuring activities, managing one's career progression, managing a struggling business, and managing the decision process throughout the change process. The themes and subthemes reflect Harland et al. (2005) and the ability of an individual to respond to workplace setbacks as a measure of one's resilience. The theme is also supported by Lane et al.'s (2013) research on resilient leadership and organizational change management.

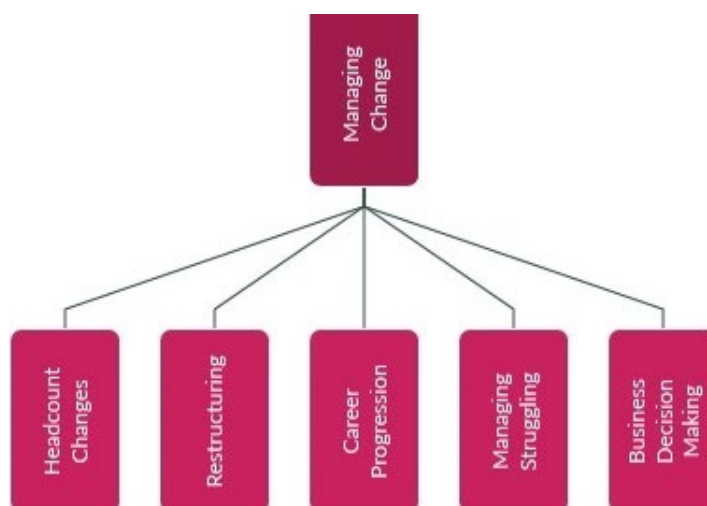


Figure 4-3: Managing Change Sub-themes

4. Managing Feedback

Multiple participants shared stories about various forms of feedback they had received throughout their careers and how some of these moments shaped their direction and, in some instances, their careers. The subthemes identified under managing feedback are related to handling difficult feedback, coach and mentor feedback, and community member feedback, both solicited and unsolicited.

Feedback and seeking help from others are reflected in Chapter 3 with Britt et al.'s (2016) Integrative Model of Resilience as processes reflecting the capacity for resilience.

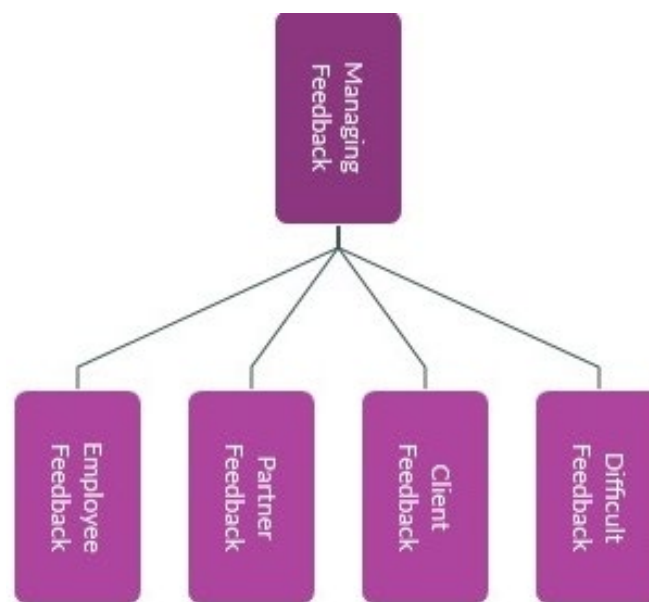


Figure 4-4: Managing Feedback Sub-themes

5. Emotional Intelligence

Throughout the interviews, participants referred to several emotional intelligence capabilities as examples. This theme comprises four subthemes based on Goleman and Boyatzis (2017) research. The subthemes are self-awareness, self-management, social awareness, and relationship management. The influence of EI and its relationship to higher levels of resilience is reviewed in Chapter 3 by the research of Howard and Irving (2013). Their findings showed that those who demonstrate higher levels of self-awareness and identity also demonstrate higher levels of resilience.

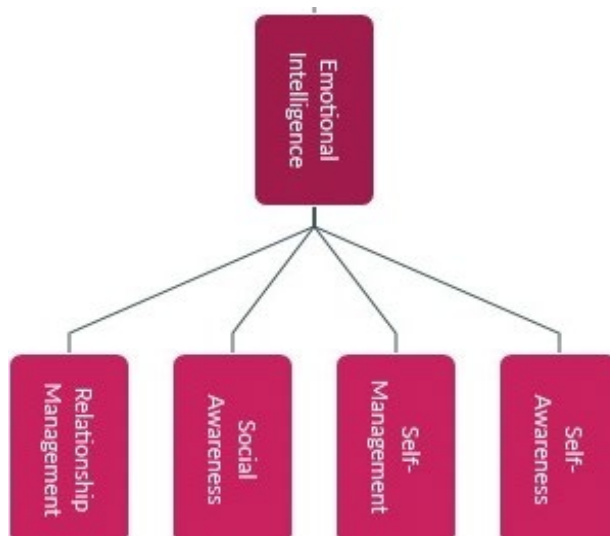


Figure 4-5: Emotional Intelligence Sub-themes

6. Leader Communication

Participants discussed the theme of communication in the context of leader communication, both how they as leaders communicated and the communications they experienced from others. This theme comprised six subthemes related to communication clear, calm, absent of panic, transparent, inspirational, and visionary. The theme of leader communication as a construct of enabling resilience is supported in the literature review in Chapter 3. Several conclusions were derived from the research of Sommer et al. (2016) and their examination of leader behaviours, such as remaining calm and communicating with clarity in a time of crisis, demonstrate higher levels of positive outcomes among team members, which results in elevated resiliency across the organization.

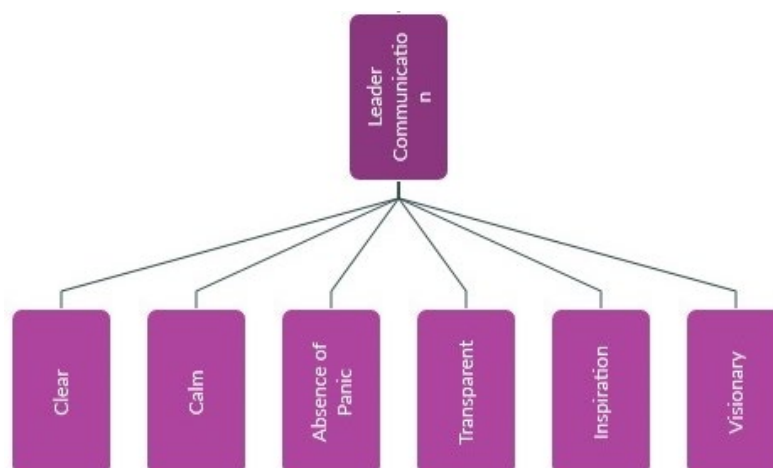


Figure 4-6: Leader Communication Sub-themes

7. Mindsets

Participants shared stories and experiences throughout the interviews about their adopted mindsets. The mindset theme comprises five subthemes: authenticity, transparency, determination, perspectives, and gratitude.

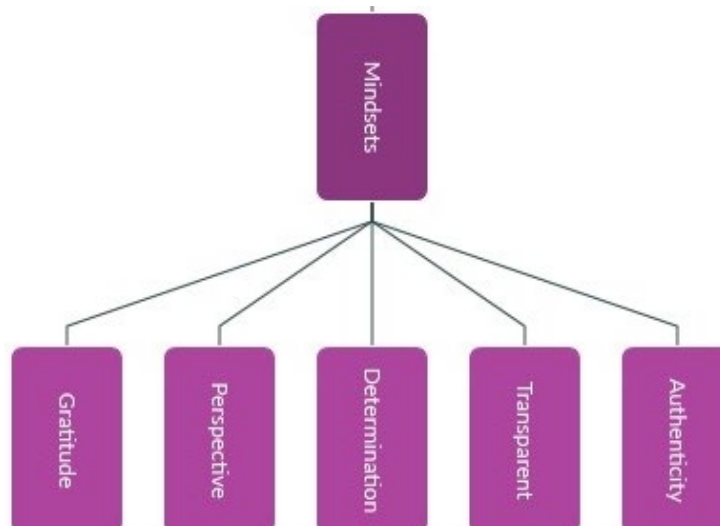


Figure 4-7: Mindsets Sub-themes

8. Organization

Another emerging theme throughout the participant interviews related to the concept of organization. This theme emerged from six subthemes: list making, note taking, communication, living the culture, and understanding the business.

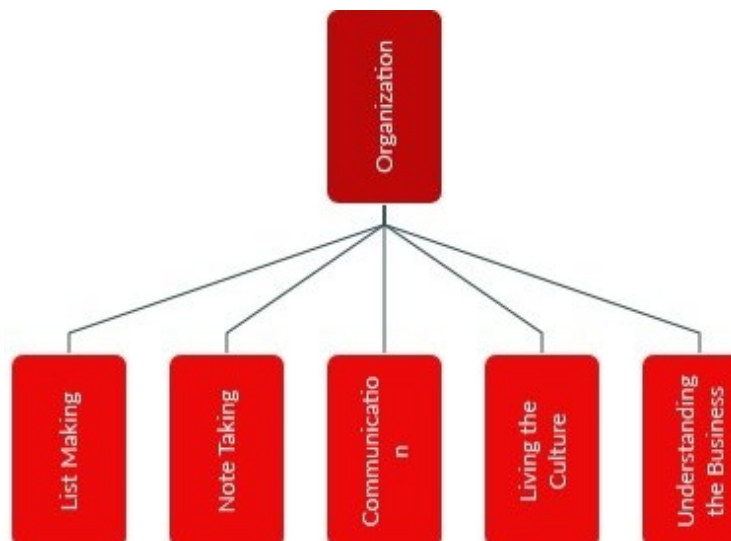


Figure 4-8: Organization Sub-themes

9. Adjusting Leadership Style

The interviews revealed the theme of adapting and adjusting one's leadership style, and in the context of this theme, adjusting leadership style comprised seven subthemes. The subthemes are personal, directive, coaching, empowering, focus, situational, and seeking feedback. The literature supports the concept of adjusting leadership style through flexibility and cohesion. These concepts are supported by Britt et al.'s (2016) Integrative Model of Resilience, specifically under the resources that influence the capacity for resilience.

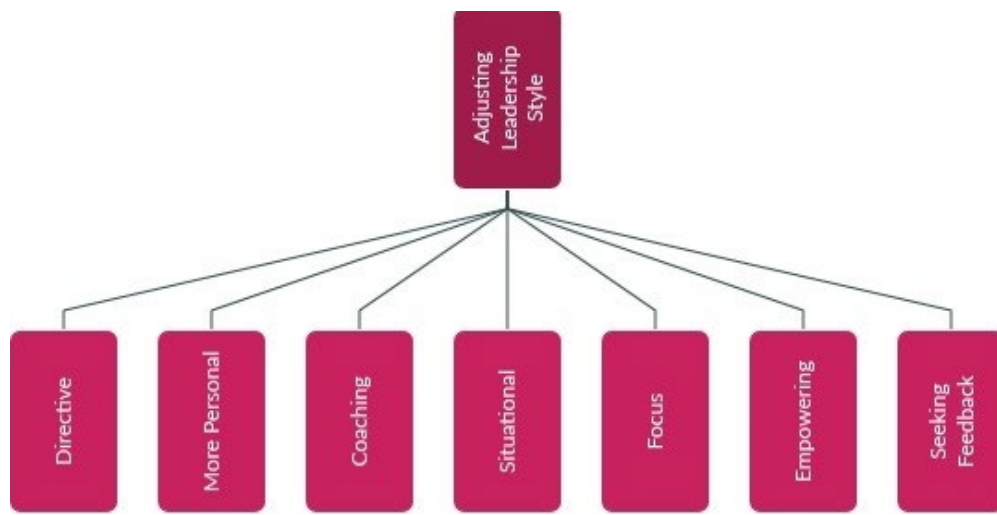


Figure 4-9: Adjusting Leadership Style Sub-themes

10. Resilience Shapers

Participants from the study identified various elements that influenced and shaped their resilience. The six subthemes are culture, experience, upbringing, suffering, failure, and vulnerability.

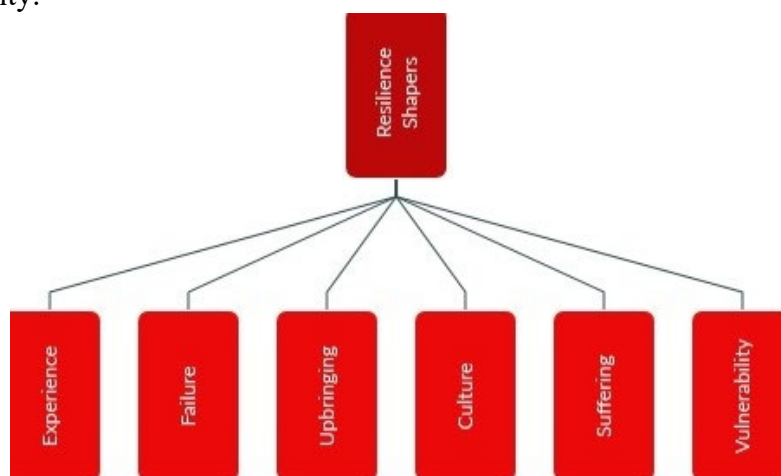


Figure 4-10: Resilience Shapers Sub-themes

11. Continuous Learning

This theme comprises five subthemes that participants illustrated: failure, reading, training, workshops and attending webinars.

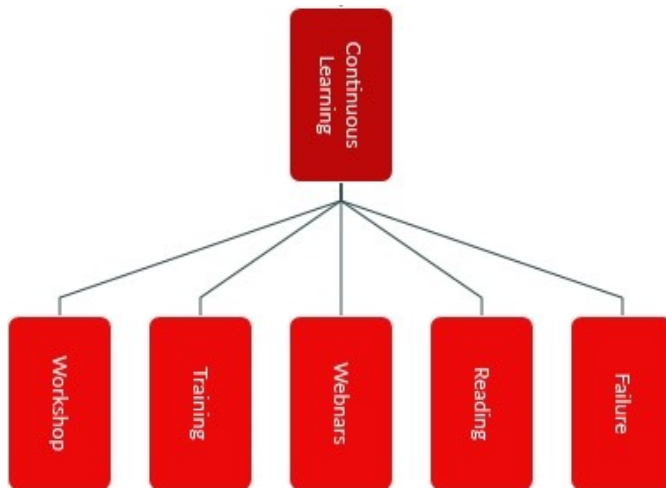


Figure 4-11: Resilience Shapers Sub-themes

This next section organizes the thematic analysis and participant responses in order of the six research questions posed for this study. The section will first outline the research question asked, followed by a figure of the specific themes and subthemes that attempt to answer the research question, followed by participant illustrations in direct support of each of the themes and their relationship to the research question.

4.5 Research Question 1

Research question 1 asked how resiliency is demonstrated by executives in day-to-day functions and during disruption and crisis events. Research question 1 also asks if the ways that executives demonstrate resiliency has changed over time. Ten questions and sub-questions were used to report and collect data to answer this question (Table 4-1). Six primary themes (Figure 4-11) emerged from the participant data in response to this research question.



Figure 4 -12: Primary Themes for Research Question 1

Many of the participants, from all three levels of leadership, spoke of having to *Manage Change* throughout their careers. Several participants mentioned changes in headcount they had to manage, as well as managing a struggling business through the crisis. Executive 5 stated:

We have had significant changes in the team, and I hired two new people to fill my open positions. It has been tough, and this has been a challenging situation that's made me think and reflect on many things.

Executive 3 spoke of managing her struggling business at the height of the oil and gas prices between 2015 -2017:

It was hard, and our business dropped by 70%. We still had to find a way to go out and make purposeful work while we all knew we would need more time to hit our targets.

Executive 6 spoke about managing during the crisis when she said:

You do not have to solve the actual crisis right away; you do not have to have the complete answer. You must be able to take the next step, breaking it down very practically; that is what resilient people do. What can I do right now? What do I know? What do I not know? Where do I have to take the next step?

4.5.1 Managing Feedback Summary

Several of the participants shared stories related to how they received feedback and how they reacted to it. At times, the feedback they received shaped them in their careers and served as valuable experiences demonstrating their resilience. Executive 2 shared a career-shaping moment from early in his career:

I had given an excellent presentation, had a well-reasoned argument, felt like I should have gotten a lot more credit, and was moderately criticized for what I did. My reaction to that was terrible. It was emotional, and it jeopardized my career trajectory at the time. I remember being just amazed at how smooth things could seem but how quickly things could be unravelled by a singular interaction that was emotionally charged. It was a career-shaping event, and that toughened me. For me, resilience is learning from painful lessons and recognizing when they are about to repeat.

Another Executive shared a story from earlier in her career where she presented to the board of directors. One of the board members challenged her on the structure of her subsidiary and what they were contributing to the overall group. Executive 1 remembers this interaction vividly as a share called the moment.

It was very stressful, but mostly because he was right. We needed to have the structure in place that we needed. Moreover, he was super challenging in saying, so you are not doing what we need you to do. You need to figure this out. Thus, we have been a part of this team for years.

Moreover, now we were being challenged to take it to another level. So absolutely, it required some resiliency, not just from an emotional standpoint as you are being challenged in a setting like that, but to deliver the product. And it was good that he did that because of the sense of urgency it created.

That moment shaped Executive 1 as she told me she would never forget how she felt standing in front of the room. Rather than feeling as though she was being berated or attacked for not doing something, she saw this event as a way for the board to set expectations and deliver them in a way she had never experienced.

4.5.2 Adjusting Leadership Style Summary

The participants share the essentials of adjusting one's leadership style throughout the interviews as ways in which leaders evolved. This can be explained by moving from an empowering, supportive leadership style toward one that is more instructive. Other example of Adjusting Leadership Style is the leader needing to be more in line with their team on both personal level and professional, especially during times of crisis. Executive 7 reflected on his leadership style shift during the COVID-19 Pandemic and how this has changed over time. Executive 7 has led through the Oil and gas price crisis of 2015 and 2017. During the crisis with COVID-19, Executive 8 shared how his directive approach is helping her team sustain the current crisis.

We cannot afford to let the current crisis make us lose momentum, and it is too hard to get it back once you lose it. I hold their feet to the fire, much accountability; it is highly directive. If you are redirecting people, you must be highly directive about how you redirect.

Executive 8's approach was echoed by several of the participants, mainly when referring to management style during crisis and disruption. The highly directive nature is seen as being critical to ensuring the sustainability of the team and the organization.

4.5.3 Mindsets Summary

The importance of Mindsets was another theme that emerged during participant interviews. By Mindsets, participants were meant to the view they chose to display publicly to their team. In addition, several participants shared stories about being determined to see the challenge through to the end. Many of the participants shared this theme, precisely the ways they approached disruption and crisis events and the ways they approached day-to-day leadership. One example of this was from Executive 3, who shared that during the height of the COVID-19 pandemic, his approach was to have a winning mindset. This was illustrated when he addressed his team following the start of the shutdown:

This is our plan for the strategy to get through this crisis. We will get over the finish line together, or not at all. We needed to stay close to our clients, and we will make up ground. We will win by sticking to our plan and structure and staying close to our clients.

The importance of Executive 3's emphasis on finding ways to win and doing it together as a team was evident when reviewing the recorded interview. This was not the first significant disruption he has had to lead a team through. His perspective to keep the focus on the result helped inform this mindset of winning.

4.5.4 Leader Communication Summary

Leader Communication was recognized as a key theme related to resilience. Many participants referenced the importance of communication during crisis and disruption, specifically during the oil and gas price crisis and the COVID-19 pandemic. Participants reflected on the messages of calm and clear direction from them as CEOs during both events. Participants identified both current and previous approaches to various communication styles as examples of resilience. Executive 9 reflected on how he responded to the COVID-19 pandemic early on.

Since I became our organization's CEO, I brought a very calm, relatable energy, if you want to call it that, to the situation. Most people might display panic in their verbiage, face, or body language. I took the global pandemic by the horns and provided a very calm tone to the situation overall.

Executive 9's example was echoed throughout the participant interviews. Participants said they felt supported and empowered to do what they needed because they believed the organization was in strong, capable hands.

Another example of Leader Communication came from Executive 3 and her reflection on how his communication has created resolve and confidence.

I am very resilient because, around my staff, I am not panicked. My communication has been—'we are going to get through this situation together.' We have taken very specific and defined actions; we have a picture of what the future might look like. We have worked through various scenarios, and we have considered that so that we can move from point A to point B with as many jobs as possible intact.

The reassurance from the top creates confidence in Executive 3's outlook that he leads his team through the pandemic.

4.5.5 Emotional Intelligence Summary

The importance of Emotional Intelligence is the last theme of research question 1 shows up throughout the research as a theme of how their resiliency is demonstrated. Emotional intelligence is the ability to identify feelings in both self and others (Goleman, 2001). Leaders with EI can use this ability to manage emotions and motivate themselves and others (Goleman, 2001). In one example, Executive 10 spoke of her intentional focus on social awareness and the significance of being more empathetic as a leader during the COVID-19 crisis.

As a leader, I need to be very in tune and empathetic. I was not empathetic before, but now it is to a different degree. I listen, acknowledge, and then say can I help you? Not just with not just the work stuff, but what can I do just human to human? This covid-19 pandemic has brought people together, even people who are just business colleagues, together in a way that creates a different connection.

Executive 12 stated that she was focusing more on his leadership's social mindfulness and relationship operation aspects. He stated that he had taken advantage of the time during the epidemic to work on his softer people chops. Because of the lockdown, he spent additional time talking with his platoon; he stated that the frequency has gone from month to week throughout the lockdown. Through the increase in frequency, Executive 12 has realized that he needs to put lesser emphasis on checking on his team members' well-being versus just agitating the criteria of the business.

I am looking at resilient leaders. There is someone calm and logical, and they are not flying off the handle. They are reading the situation and looking at the people's body language, figuring out where they are and trying to come to them at the point that they are currently at so that they can bring them to their future vision. See, I think there are many ties to emotional intelligence and resilience.

This concludes the summary of themes identified concerning research question 1 as told through the participants' stories. The following section traverses the themes related to answering Research Question 2.

4.6 Research Question 2

Research Question 2 aimed to identify specific characteristics and behaviours of resilient leaders in the oil and gas industry. These attributes and actions were shared in day-to-day functions, the Oil and gas price crisis, and Covid-19 Pandemic. 11 questions were used to report and collect the data to inform Research Question 2 (Table 1). In addition to identifying behaviours and characteristics of resilient leaders, Research Question 2 also sought to understand how these behaviours and characteristics may or may not have changed over time.



Figure 4-13: Primary Themes for Research Question 2

4.6.1 Mindsets Summary

Participants identified a variety of Mindset characteristics that shaped their behaviour. While reflecting on how he has changed his perspective over time, Executive 14 shared his Mindset of being solutions-oriented and thinking and planning. Executive 14's story is set back earlier in his career when he ran a sizeable active operation 24 hours a day. This experience forced him to start thinking six months to a year in advance instead of only worrying about tomorrow.

I have screwed up enough that I realized I had to start thinking six months or a year in advance instead of tomorrow. I do not know how this can be explained, but one of the main things I see when I talk to new team members about what to plan and how we are going to act is how we get caught up in the moment. In my mind, I am always

thinking six months in advance, a year, and I almost do not worry about what happens today.

Executive 14's reflection is evidence of the importance of having been through a few challenges earlier in his career, which has prepared him for the challenges he faces in the present. Having learned from his past experiences, he takes a long-term strategy to plan.

Executive 13 shared his view on his Mindset of being comfortable with letting things go and focusing more on what one can control versus the things one cannot control.

I have come to appreciate that there is more to life than business and that you can control only certain things personally. Once you can let go of that, I think it helps you to build your resilience because you are not holding on so tight that you cannot bend back. I think that was one of those things I learned ten years ago that I am not in total control here, and there is only a certain number of things I can do, and that I should not try and control everything.

Executive 13's experience with his relationship crisis ten years earlier has informed his perception of the present. Through that experience, he shared with me that he does not let the things he cannot control get in the way of him moving forward.

4.6.2 Emotional Intelligence Summary

Several participants mentioned that leaders in the oil and gas industry demonstrate *Emotional Intelligence* as a behavioural action related to resilience. Executive 7 spoke about his observation of other leaders who demonstrate these behaviours and the link between resilience and *Emotional Intelligence*.

I look at resilient leaders as being very self-aware of their emotions. Some are calm and logical and do not fly off the handle. They are reading the situation and looking at people's body language to figure out where they are and trying to reach them at the point they are currently at. So that they can bring them along to their future vision. I think there are many ties to emotional intelligence and resilience.

Speaking about relationship management, Executive 11 reflected on whom she has in her inner circle as a go-to and how approachable she is, especially during the COVID-19 pandemic.

So, the one thing I have changed is that I have taken a hard look at myself, who is my network and whom I am talking to and not talking to you. Who has been my inner circle, and who are my go-to people? Furthermore, what about the others? How approachable am I? I always operate under the context that I have an open door, and you can always reach out and ask me something. Moreover, when people do, I always give them space and support them.

Executive 11 closed this conversation by reflecting on the importance of people at her level now, more than ever, of having more one-on-one conversations with people and ensuring they are approachable. She shared with me that just because he feels she is always available to others, that does not necessarily translate to others feeling secure to share with her. She mentioned that it is difficult to read at work and home. He specifically talked about her body language and micro-expressions and tied that back to what the perception of others might be related to her openness.

4.6.3 Organization Summary

The last theme of *Organization* refers to the oil and gas industry leaders demonstrating specific behaviours related to staying or adjusting to new targets and their actions to achieve those targets. The first example of this comes from Executive 8, who spoke about understanding the business and being agile with modifying targets for the various teams he supports to achieve the unit rating for his group.

It is interesting because we have gone through iterations of the team's contribution targets even during the Covid-19 pandemic crisis, right? We have already put the elegant piece of our new target set to use. We can agree on one thing, maybe you shift gears, though some of that has not changed. It has just reinforced the importance of it and coming back to our unit rating as the benchmark.

Executive 8's agile and flexible approach is one example he shared as a behaviour modification that has been adjusted over time based on learnings from experience.

Executive 15 spoke of the importance of organizing her cadence by making lists and using that as her guide to follow up and follow through.

I know that I am consistent when I write things down, and I have a cadence of, I am checking in with you, you know, every Friday, I am following up with you every two weeks. Moreover, this is what we will go after and what we will go over. I will follow

up on those open topics from last time, and you add on the new ones you have, and I'll add on whatever I have, right? And it is a fundamental, tedious approach, but it is consistent.

Executive 15 emphasized that her approach is essential and tedious, but it drives consistency, and consistency is what she felt her team needed while working through the COVID-19 pandemic. This concludes the summary of themes identified concerning research question 2 as told through the lens of the participants. The following section explains the themes related to answering research question 3.

4.7 Research Question 3

Research question 3 asks how the use of emerging technology can enable resilience in oil and gas leaders to optimize the industry. A total of 3 questions were used to report and collect data to answer this question. Six primary themes were addressed in the responses from the participants



Figure 4-14: Primary Themes for Research Question 3

4.7.1 Continuous Learning Summary

Most of the participants in the study spoke on the use of emerging technology for their Continuous Learning, which shaped their resilience as a leader to maintain a contending edge in the oil and gas industry. One of those mentioned often was the importance of emerging technology as a learning mechanism for further shaping their resilience. Executive 3 shared his insights on the importance of emerging technology conversations and reflections on the failure.

As I grow through life, every day, I learn new things that shape our unique experiences and the kind of knowledge we can share to support taking a business to new heights. Using emerging technologies for learning requires paying keen attention to purpose, visions, and goals for long-term personal and professional success.

Executive 5 stated that the more he finds new techniques to show individuals that they have already succeeded, the more he can encourage them to go out and succeed in a different form using new innovative technologies. Executive 5 also emphasized the importance of Reflection, stating that leaders need to take the time to back to recorded training videos. The subtheme of training also surfaced when agitating ways and learning practices for building resilience through attending workshops and webinars. Executive 2 agreed with continuous training as a key influencer in shaping resilience in oil and gas industry leaders.

Continuous learning in my office is set in place to increase employee skill sets, expand skill and knowledge, generate new ideas and perspectives, encourage morale and raise overall employee performance. With technology's exponential growth, my company compete against competitors on speed to keep up with these growth changes. Thereby requiring our staff to readily adapt and tailor their expertise, knowledge, and experiences simultaneously to fit niche markets for maximum outcomes. Doing this fosters resilience for me as the CEO.

Executive 2 further shared that the case study method is a good substitute but needs to replace the effect and impact of experience in a real-world context. Executive 2 reflected on his mode of learning during his MBA. He mentioned it was a great experience, but more is needed to replace the value of the experience in real-life training.

Training is critical for fully realising business change. In the middle of the lockdown, leaders across levels and functions had time on hand. Organisations took this downtime as an opportunity to upskill their workforce and ensure that they have the knowledge, skills, and abilities to meet future demands—strengthening the effectiveness and productivity of the entire organisation. An effective learning strategy and plan, along with a virtual training platform, can help prepare the workforce for future uncertainties.

4.7.2 Managing Change Summary

The theme of Managing Change emerged from the participant interviews as an enabler of resilience. One example came from Executive 11 as he told a story about managing change and helping to realize the intended business outcomes using technology during the oil and Gas price crisis in 2015.

Managing people as part of change is amongst the most challenging part of my work, and it requires comfort and competency with uncertainty, ambiguity, and conflict.

Moreover, you know transformation and change are increasingly becoming the new normal in our industry. While this normality has helped to make me more open to change, I still need to plan, communicate, and manage specific changes. I used agility and continuous improvement to manage change correctly.

As Executive 11 shared this story, the expert knowledge behind his voice was highly emphasized. He also shared that this experience taught him so much more than just about running a business; it also made him a better person. Executive 11 shared that despite every effort to improve his team's morale, his organization's employee opinion survey only improved by one point. His planning was tending to fixate on technology and neglects the behavioural and cultural factors that inhibit resilience.

To ensure project success and maximize benefits, plan and facilitate the non-technical aspects of organizational Change by I addressed the emotional, behavioural, and cultural factors that foster stakeholder resistance and influence my resilience.

Managing Change related to business decision-making is another theme many participants mentioned, especially at the beginning of the COVID-19 pandemic. Executive 14 told a story related to the business decision-making and pivoting of the daily work activities of his entire sales team during the shutdown.

The COVID-19 crisis confronts us with the complex task of making decisions regarding staff health and safety. We must react to a threat of which the degree is unknown. We were making decisions under time constraints amid immense uncertainty and increasing the chances of promising outcomes as the crisis progressed.

Executive 14 was not alone in completely redirecting his teams' activities. Many research participants faced similar decision-making challenges across the oil and gas industry at the height of the pandemic. The feelings shared by many of the participants was that there was so much unknown at the start of the lockdowns across the world. Team leaders were influenced by several separate but related issues created by chaos and change.

Some organisations moved away from face-to-face calls, even when the pandemic was over. Some participants echoed the use of a hybrid system even during a post-covid-19 pandemic. This hybrid system is a reduction in face-to-face calls, and an increase in technologically enhanced communications emerged as the new normal.

Executive 14 stressed the emergence of hybrid systems in his organisation. His thoughts about the future provide evidence of hybrid models being more common:

It is going to be a hybrid model. We still need to see people... That was true for the internal teams and the contact with the customer. You cannot do it all by Teams... We will not have the same level of face-to-face contact in the same room as we used to. I do not think that is ever coming back.

Executive 4 share similar experience as follows

We went into a meeting with our client at some points immediately after the Covid-19 pandemic lockdown and tried to do a virtual meeting. We could only see some things on the line where they were willing to give us a contract. They said, 'okay, we need your help. Can you come in?' You do not get to say: 'I'm going to be in your area. I want to stop by, and if I can help you with anything, I will help you.' It is got to be with purpose, and more so with a purpose to the point that we could not have been able to resolve it either over the phone or through video.

This was especially true for those who work in direct field sales. These team members moved from visiting customers and large job sites to being sequestered in their homes, forced to manage their territories virtually.

4.7.3 Managing Feedback Summary

The next theme that emerged in the participant data was related to Managing Feedback. Participants shared how they managed various forms of feedback throughout their careers and the ways this influenced their resilience. One example of this came from Executive 4 and his experience convincing as CEO giving difficult feedback to partners, clients, and employees. He shared how he had to talk about his leadership capability using emerging technologies as a medium for feedback.

I Incorporated feedback from affected countries into our COVID-19 response to help me identify the most effective solutions to address the needs of those I serve. I prioritized listening and acting on feedback from affected countries in my Covid-19 program to save valuable time and money.

Executive 4's most significant learning from this experience is giving challenging feedback. He shared with me how his confidence grew as he realized he could take his capabilities elsewhere if he had to. Many employees were evaluated against parameters that have been

unachievable during the crisis. Executive 7 shared his experience of the evaluate his staff performance appraisal.

During the Covid-19 Pandemic, your entire workforce may have been working remotely, and many employees continued to do so. When employees were working remotely, they felt that their work was less visible or that they had less opportunity to highlight to you the work they were proud of. It was necessary, therefore, to ensure my review was a two-way discussion. For reviews to be effective, they should always be interactive, with employees given just as much time to share their perspectives as their manager. Today, however, it is even more vital that a review feels like a conversation, with employees able to highlight to you their achievements, successes, and performance.

Encourage continuous performance discussions and provide managers with tools and resources to lead through uncertainty.

4.7.4 Organization Summary

The theme of *Organization* refers to the oil and gas industry leaders demonstrating that technologies and systems influence an organization's business resiliency depends on its. Technology leaders should assume the role of crisis leaders. Technology leaders must devise and execute strategies across plans, people, and practices to respond to the challenge ahead. Each is significant for keeping people safe and productive and creating a resilient organization. The first example comes from Executive 11, who spoke about understanding the business and organizations to put strategy and ways in place to ensure operational resilience.

I am often pulled into responding quickly to challenges in crises, such as the COVID-19 pandemic. I needed to respond quickly to some issues, such as by enhancing remote work capabilities and securing critical assets. It was essential that I put organizational strategy and plans in place to ensure organizational resilience. This early focus on planning ultimately helped me execute quickly and effectively.

Executive 11's strategy and plans put in place is one example he shared as a behaviour modification that has been adjusted over time based on learnings from experience.

Executive 15 spoke of the importance of organizing her leadership in using technology for the process.

I have an opportunity and an obligation to help lead our organizations through both the Oil and Gas Price Crisis in 2015 to 2017 and the Covid-19 Pandemic from 2020 to date with my knowledge and the power of technology, so I usually prioritize my efforts on technologies and systems because I know that organization's business resiliency depends on it.

Executive 15 emphasized that her approach is essential and tedious, but it drives consistency, and consistency is what she felt her team needed while working through the COVID-19 pandemic. This concludes the summary of themes identified concerning research question 3 as told through the lens of the participants.

4.7.5 Leader Communication Summary

Leader Communication was recognized as one of the key themes related to the topic of demonstrations of resilience. Many participants referenced the importance of communication during crisis and disruption, specifically during the oil and gas price crisis and especially during the COVID-19 pandemic. Participants reflected on the messages of calm and clear direction from them as CEOs during both events. Participants identified their approach to various communication styles as examples of resilience. Executive 8 reflected on how he responded to the COVID-19 pandemic early on.

We still have technical difficulties from time to time. People buy things from people. It has been tough to launch new products, new initiatives, and new programs. The changes we made in our company happened; those things have been hard to communicate. All trade-based events, trade shows, customer fairs, conferences, workshops, plant visits, and sales blitzes were eliminated during the Covid-19 Pandemic lockdowns. It was very tough. The winners in this were the distributors with a vibrant e-commerce platform and the ability not just to transact business but also to attract new customers from a virtual platform.

Executive 8's example was echoed throughout the participant interviews. Participants said they felt supported and empowered to do what they needed because they believed the organization was in strong, capable hands.

Another example of Leader Communication came from Executive 11 and her reflection on how her communication has created resolve and confidence in assessing new communications.

There were some growing pains in the morning, and lower communication than we would like to consolidate it into this is the one big bone you need to pay attention to was essential.

Executive 4 share similar experience as follows

It was crucial at first because the effects were changing so constantly. However, now that we have a system in place, the update is being rolled out, as usual, every day. If anything, new is changed, it has stressed within the update that we have figured out what has been working well, and we have more minor changes to our daily updates. Effects feel to be communicated better.

The reassurance from the top creates confidence in Executive 11's outlook that he leads his team through the pandemic. Executive 15 shared her experience also.

Many places will not let you do face-to-face... If we go to a customer, we have them fill out a questionnaire to say, "I got this person from a client coming in. If they travel via public means of transportation, we will not allow them into your facility?" Because what we discovered was that when we did finally get someone to a customer, and they got to know they were on an aeroplane, they would not allow them into the facility.

The following section explains the themes related to answering research question 4

4.8 Research Question 4

Research question 4 asks what influences and shapes different forms of resilience in oil and gas industry leaders. A total of 7 questions were used to report and collect data to answer this question. Six primary themes were addressed in the responses from the participants.



Figure 4-15: Primary Themes for Research Question 4

4.8.1 Continuous Learning Summary

Most of the participants in the study spoke of various influences throughout their Continuous Learning experiences that shaped their resilience as a leader. One of those mentioned often was the importance of experiencing failure as a learning mechanism for further shaping their resilience. Executive 8 shared her insights related to the importance of enabling conversations and reflections on the failure.

An enabler in our industry would be a culture that allows a discussion around failure or perception of failure. It is a must because how can we grow in the industry if we do not discuss our failures? Because we all fail, the act of failing does not make us better. What makes us better reflects failure. So that piece will be essential for me. So, I would start erecting adaptability by erecting an association that accepts and talks about failure.

Executive 8 stated that the more he finds mechanisms to show individuals that they have already succeeded, the more he can encourage them to go out and succeed in a different form. Executive 8 also emphasized the importance of Reflection, stating that leaders need to take the time to reflect, not just on their failures, but as a practice overall. The subtheme of Reflection also surfaced when agitating ways and learning practices for building resilience. Executive 2 agreed with the notion of failure as a key influencer in shaping resilience in oil and gas industry leaders.

Learning from others who fail and succeed is much more powerful than learning from a lecture, case study, or book. Yes, that is fodder. That is good stuff that's good raw material, but it is not learned or embodied until somebody puts it to work and then fails at it and then tries again until it works. So, I love putting people in regional manager positions when they are still getting ready for it. It is costly sometimes. Moreover, sometimes it is costly for them as well. Sometimes they do not get over that failure, by the way, but those that do, really develop some incredible resilience out of it, and it is compelling for them in their career but also for the company.

Executive 2 further shared that the case study method is a good substitute but needs to replace the effect and impact of experience in a real-world context. Executive 2 reflected on his experience engaging in case of study learning during his MBA. He mentioned it was a great experience, but it does not replace the value of the experience in a real-life scenario.

4.8.2 Leaving Home Summary

Relocation and leaving the comforts of one's familiar surroundings is another theme that quickly emerged throughout the participant interviews. 7 of the 15 participants have relocated internationally on an international assignment. The theme of Leaving Home and working abroad was identified as one of the themes that influence and shapes different forms of resilience.

Executive 2 shared his experience leaving the comforts of the familiar in Nigeria to take on a senior management role in the United Arab Emirates.

My first move to Abu Dhabi in UAE was a defining moment. Moreover, one that I now know in hindsight almost broke me as a person, professionally and personally. In the end, I emerged much more vital than ever before. I kept my big goal in mind, this whole idea of, why am I doing this? Do I understand why I am putting myself into this challenging situation and what is in it for me? Why am I doing this? Just refocusing on it is worth it at the end of the day. Once I did this, it did allow me to have more stamina to go through the more challenging experiences that came along with it.

Executive 2's shared his experience of leaving the comforts of home, where he had a great group of friends, enjoyed his work at that time, and had, in his words, "a communal life".

Executive 2's decision to upend all of it by taking a step back and moving to another continent to pursue a greater goal is symbolic of many participants who took on development roles outside their familiar surroundings. There is commonality across participants who have made relocation sacrifices in the pursuit of career development and growth.

I asked Executive 2 if he was resilient before this or if this event-built resilience in him. He felt as though he had resilience prior, but this was a defining moment for him in his career, and he is far more vital now than he was before having gone through it.

Executive 3 shared a similar experience when she relocated from another continent. Her experience of being away from home and integrating into a new culture was challenging for her early on.

I had huge challenge when I was immigrating and moving to Malaysia. That was way more challenging than I thought it was going to be. It was tough. For me, that was tough, and I struggled with adapting to a new culture and the loneliness and the homesickness of moving away from my tribe and trying to integrate into a new tribe.

When asked if Executive 3 was resilient before or if this event-built resilience in her, she responded with the following analogy:

Resilience builds up almost like a shell on a tortoise, and it is layer upon layer; you do not just arrive with it. Life gifts it to you in many ways by giving you difficult situations to deal with because that builds your resilience. If you are unlucky enough to go through life without challenges, you do not get lucky enough to build resilience.

Executive 3 also shared with me that it was still challenging despite speaking the language, already working in the construction industry, and having what she thought was familiar with the culture of America. The terminology, the applications, and the personalities were so different; she underestimated this and struggled with her integration for months. She stated that this led to feelings of loneliness and a longing for her tribe.

4.8.3 Managing Change Summary

The theme of Managing Change emerged from the participant interviews as an influencer of resilience. One example came from Executive 5 as he told a story about taking on a senior leadership role at an EPC company in Singapore that was significantly underperforming during the oil and Gas price crisis in 2015.

It was a new challenging job and a big step up. I knew it was early in my senior management role, but I was ready and beyond excited to take on the challenge. Those two years, I was facing so many things every day, and nothing worked; you know, it was a long, long journey towards recovery.

As Executive 5 shared this story, the passion and energy behind his voice were highly emphasized. This experience was a career-shaping moment for him. He also shared that this experience taught him so much more than just about running a business; it also made him a better person. Executive 5 shared that despite every effort to improve his team's morale, his organization's employee opinion survey only improved by one point. He said this was like a punch to the gut, but what it taught him was that change takes time, the changes he was implementing were the right ones, and the payoff would be there eventually.

This experience required much resilience to get through it. And then the question is, did I handle it perfectly? Not. Could I have done the same way today, six years later? Not. However, did it define me as the person and leader I am today and as the father and the person I am today? It did.

When Executive 5 left the position four years later, the business doubled in sales. Employee engagement was at an all-time high, as indicated by the annual employee opinion survey.

Managing Change related to restructuring is another theme many participants mentioned, especially at the beginning of the COVID-19 pandemic. Executive 3 told a story related to the restructuring and pivoting of the daily work activities of her entire marketing team during the shutdown.

Keeping our directive somewhat fluid is a challenge. Our teams are not accustomed to shifting on the fly. I mean, we have had a directive for one week only to refine it or change it just a few short days later. The teams need to respond better to this. Thus, helping them understand that I am telling you this today, it might change next week, depending on how the dynamics of the situation change and helping them stay somewhat fluid helping them stay somewhat productive, helping them understand how they should be, and what they should do every day when they now cannot be out in front of their customers. That has been the biggest challenge because I work longer hours than I would normally. But it is really just trying to keep everybody motivated and productive.

Executive 13 was not alone in completely redirecting his teams' activities. Many research participants faced similar challenges across the oil and gas industry at the height of the pandemic. The feelings shared by many of the participants was that there was so much unknown at the start of the lockdowns across the world. Team leaders found themselves with changing narratives daily as the organization responded in real-time to the impending crisis. This led to feelings of dislocation, as many are accustomed to a highly stable, process-driven approach to their daily work. This was especially true for those who work in direct field sales. These team members moved from visiting customers and large job sites to being sequestered in their homes, forced to manage their territories virtually.

4.8.4 Managing Feedback Summary

The next theme that emerged in the participant data was related to Managing Feedback. Participants shared how they managed various forms of feedback throughout their careers and the ways this influenced their resilience. One example of this came from Executive 14 and his experience convincing a former executive of his ability to lead and take on greater complexity. He shared how he had to overcome the former executive's doubts about his leadership capability while preparing to present to an executive round table.

There are moments leading up to these events where you must present yourself. There are many nerves, of course, and a lot of second-guessing. Do I have all my stuff together? What questions or challenges will I get? You have to prepare extremely well for those situations. Nevertheless, there are moments when you have to make a decision: you will go for it and put yourself out there, or you will pull back and say I cannot do this. Those are the moments where your resilience puts you over the edge and says, no, I got this, and I am going for it. Rather than finding an excuse or bringing somebody else with you, or sharing the burden, but not putting yourself out there.

Executive 14's most significant learning from this experience was that he believed in herself despite the challenging feedback. He shared with me how his confidence grew as he realized he could take his capabilities elsewhere if he had to. He was able to convince the former executive of her leadership capabilities. There is an inspiration in his story, as often many would have given up, and either settled into believing they were incapable or would have left the company altogether. Executive 14 persisted and met the challenge with determination and resolve to prove the executive wrong. In the end, he excelled and today holds a critical role in leadership in the industry.

4.8.5 Overcoming Personal Crisis Summary

Many participants spoke of various personal challenges they have had to overcome. Several participants shared stories of losing relationships, whereas others shared stories of managing a health crisis. Others shared stories of losing a family member and the effect that had on them as people. What appeared to be consistent throughout the various participants' stories was that all these moments influenced them. Many described the manifestation and development of resilience as they experienced these personal crises firsthand.

The first example of Overcoming a Personal Crisis came from Executive 6 as he shared his story of overcoming a health crisis.

When I first got diagnosed, it was a rare disorder, and it stopped me in my tracks as I sat and thought okay, I had got a 50:50 chance here; this is overwhelming. Moreover, I had to turn that from sitting there like a deer in the headlights to, okay, let us do some research. Let us figure this out. Let us understand where I go and what I need to do. So, I turned it quickly from being in an overwhelming situation to how I dealt with

it. I think that is where that kind of resilience piece kicked in. I just realized that I was the only person who could turn this around.

I asked Executive 6 if he had resilience before or if this crisis-built resilience in him. He shared with me that he felt like he always had it there, but this event made him realize the capability was within him to draw upon.

Executive 4 shared his journey of caring for a loved one battling a terminal illness and the challenges he faced trying to care for her from across the country. He shared that while going through the most challenging time, he realized he did not have to navigate this alone.

A part of resilience for me, and to answer your question, was learning not just to take this situation alone but to find ways, to be honest with others. To find ways to leverage their strengths to help me and bring other perspectives back to the situation.

When I asked Executive 4 if this crisis-built resilience in him or was already there, he shared with me the following response to the question.

I thought, yeah, I am resilient. I can do this. Nevertheless, it depends on the magnitude of the situation when you figure out what does it mean? I think your resilience is relative to the size of disruption you are dealing with.

Clearly, this tragic experience influenced and shaped not only Executive 4's resilience but also his outlook on the importance of having people around him from whom he could pull strength. Executive 4 also shared that asking for help from others was a sign of strength but not a sign of weakness. This explains his actions were as a result of his evolution as a leader from one an ego-driven to a more people-focused and mission-driven.

4.8.6 Resilience Shapers Summary

The final theme to emerge from research question 4 was what shaped resilience in various leaders in the oil and gas industry. Executive 12 referred to the organization's culture as an influencer of different forms of resilience. The excerpt below refers to the environment the organization creates to influence and shape resilience.

I mean, for sure, the environment. If the environment is collaborative and you call it overall positive, you develop a resiliency with a more positive connotation, right? If the environment is challenging, you need to break through walls and force your way through them. Everybody is against you and needs to prove everybody wrong. You

develop a resiliency that is much more combative, much more aggressive and with higher levels of stubbornness. You must develop calluses to survive. You might be resilient in that environment, but you are angry at the world.

The relationship between vulnerability and resilience was also explored during the participant interviews. Many participants felt there was a clear link between vulnerability and resilience; in essence, you cannot have one without the other. This is an influencer that shaped resilience. Executive 7 shared the following example:

If you cannot be vulnerable, you must be correct and perfect. Then things are seen as threats that are not a threat. Then you become overly competitive with others, with peers, so you do not share, and they need to get the best idea. I think it starts to cascade, and if I am worried that any sign of weakness is going to lose my followers, then I am going to behave in a way that's not inclusive, and I am not going to get to the best solutions, and it is going to be very lonely.

Executive 7 stated that the relationship between vulnerability and resilience goes hand in hand. He did not believe one could have vulnerability without resilience because it would make the individual too brittle. This concludes the summary of themes identified concerning research question 4 as told through the lens of the participants. The following section explores the themes related to answering research question 5.

4.9 Research Question 5

Research question 5 asks what techniques and learning practices can proactively cultivate resilience in the next generation of Hilti leaders. Three questions were used to report and collect data to inform the answer to this question (Table 4-1). Three primary themes (Figure 4-15) emerged in the responses from the participants related to answering research question 5.



Figure 4-16: Primary Themes for Research Question 5

4.9.1 Resilience Shapers Summary

The theme of *Resilience Shapers* emerged again in research question 5. This theme also appeared in research question 4 under a slightly different context as an influencer. Here in research question 5, *Resilience Shapers* are seen as an output that can proactively cultivate resilience. The first example was shared by Executive 9, who shared his insight on the relationship between vulnerability and resilience.

Being vulnerable makes you open, evolving to become a better leader, translating into Resilience. Resilience is constant evolution and change. Do that continuous evolution and change and adaptability. Being vulnerable makes you get help from other people.

Another resiliency shaper is the practice of failure. Failure was also a subtheme mentioned in research question 4 by Executive 4. In the context of proactively cultivating resilience in the next generation of oil and gas industry leaders, empowerment and failure was a method shared by Executive 7.

In my mind, it empowers people to make decisions, celebrates their failures, and asks them to share them broadly, you know, so that other people do not fall into the same problem. Furthermore, when they fail, be there to pick them back up and encourage them to try again. You know, okay, if we hire a lot of Thomas's and they fail 10,000 times, maybe the organization does not have the longevity that we would hope, but most people will not fail 10,000 times.

The reference from Executive 7 to Thomas Edison was from an earlier part of the conversation where he joked about how many times it took Edison to have success. It became fitting here as he shared his insights on empowerment and failure and their relationship to future leader development.

4.9.2 Emotional Intelligence Summary

The theme of *Emotional Intelligence* emerged again in research question 4. Like the previous emerging themes, the *Emotional Intelligence* theme was shared by the participants as a learning practice enabling resilience cultivation. The first example is from Executive 12, an excerpt from his conversation.

I believe in learning self-awareness and self-reflection. I have been mentioning meditation and how that can help you develop your self-awareness and self-reflection, both are so important for resilience, right? We talked about emotional intelligence,

and again, this is through self-awareness, knowing where your emotions come from, what triggers your emotion, and how they can impact your behaviour. So, I think, again, that self-awareness, self-inspection, and taking the time to think through are a good practice for resilience.

Executive 12 mentioned several times throughout his interview that he sees a strong correlation between Emotional Intelligence and resilience. He expressed that understanding yourself and how you react to stresses and pressures is critical to your development as a leader.

Another example of the importance of Emotional Intelligence as a practice for developing resilience was shared by Executive 14. The context from which Executive 14 spoke was relationship management and the importance of finding and leveraging mentors and coaches as an avenue to help build one's resilience.

In terms of mentorship, I was fortunate along the way to have people recognize what I have done and say, 'I think he can do more and let us give him this opportunity.' I have been given several opportunities in the early years of my career because prior to them, somebody said, this person is conscientious and flexible, and, you know, will stay focused on a goal.

Executive 14 also shared a story about his experience in the oil and gas industry before he was in a leadership position and the importance mentors played in helping him develop throughout his career, especially as he moved from individual contributor to team leader.

In both participant examples shared, the link to Emotional Intelligence was evident to them and several other participants. The literature reviews that substantiate this idea are in the study conducted by Goleman (2001), Howard and Irving (2013), and Bande et al. (2015). The ability of someone to regulate and manage their emotions and reactions is an example of high Emotional Intelligence and a resilient personality (Bande et al., 2015).

4.9.3 Continuous Learning Summary

The theme of Continuous Learning emerged again in research question 5. Similar to the previous emerging themes, the Continuous Learning theme was shared by the participants as a learning practice that cultivates resilience. The first example was shared by Executive 9, who reflected on the current training curriculum. He felt that there needed to be more discussion around crisis management.

I enjoyed the past training but did not hear 'crisis' in any of them. Do you know what I mean? Like, nothing around crisis management. Even basic stuff, like, stuff that happens every week in the oil and gas industry, safety risk and hazards on a job site. Dealing with sharp downturns in the industry means a lot for both the team and the individuals?

Executive 1 went on to share her experience working abroad and working through various business simulation exercises that enable crisis planning to come through in a gaming format.

Another example of Continuous Learning as a theme of proactively cultivating resilience was from Executive 11, who shared her views on utilizing case studies and consequential leadership training.

I would love to see us do more leadership training/conferences in the industry. More about a workshop on to be a great leader. Especially during disruption. Accountability sometimes makes us nervous. We hold our people accountable to the numbers, but why don't we hold managers accountable for less-than-stellar leadership behaviour? We do not review our leaders on anything but their numbers.

Executive 11 shared that she learned best while observing other great leaders. Her perspective was that there would be great stories of leadership that emerge from the COVID-19 crisis and that we need to have an organized way to learn from those experiences. This concludes the summary of themes identified in relationship to Research Question 5 as told through the lens of the participants.

4.10 Research Question 6

Research question 6 asks how leaders can move faster towards digital transformation in terms of digital investments and potentially rethink the technical architecture and the ability to draw on an expanded network of digital solutions that may provide a more resilient infrastructure. A total of 3 questions were used to report and collect data to answer this question. Five primary themes were addressed in the responses from the participants.



Figure 4-17: Primary Themes for Research Question 6

4.10.1 Continuous Learning Summary

Most of the participants in the study spoke of various investment that has been made in training employees and how they are willing to increase the investment in continuous learning because it helps their resilience as a leader. One of those mentioned often was the importance of investing in digital learning mechanisms for further shaping their resilience. Executive 1 shared her insights related to the importance of enabling conversations and reflections on the failure.

When analysing the costs of digital learning, it is essential to remember that it costs significantly more to onboard a new employee than to upskill a current employee; also, we make a lot about the cost of investing in digital learning. The more we put in, the more we get out, i.e., the more we invest in digital learning, the more we are rewarded.

Executive 1 stated that the more he invests in digital learning, the more his organization is rewarded, and the more he can encourage them to go out and succeed in a different form. Executive 8 also emphasized the importance of Reflection, stating that leaders must invest in digital learning as a practice overall. Digital learning practices will build resilience. Executive 3 agreed with digital learning as a key influencer in shaping resilience in oil and gas industry leaders.

We are investing in digital learning because our employees need to possess or acquire the skills and knowledge required to perform their job responsibility and contribute positively to our company teams. We always remember that all skills acquired before joining our company, new skills need to be developed and also need to be refreshed as their roles change. We stake solidifying and updating our current skillsets while branching out and learning new or complementary skills.

Executive 3 further shared that continuous learning is about intentionality that will affect and impact experience in a real-world context. Executive 3 reflected on his experience engaging as a leader to keep leaders apprised of emerging technologies and ensure that employees have skills to take advantage of the opportunities they present. He further states that.

I know that the future of many formal training classes will be online, in real-time, and interactive. The trend towards distance education that existed prior to the COVID-19 pandemic has accelerated virtual training. Not all online learning is the same, in any

case. Choosing a provider with years of experience delivering captivating and interactive real-time education both in-person and online is crucial.

As Executive 12 shared his belief about digital transformation with great passion and energy behind his voice.

Focusing on our staff is one of the critical pillars of digital transformation. Creating a continuous learning culture shows our employees that we want them to succeed and grow. I want your team to grow, so I demonstrate my commitment to growth. By doing a small quantity of work and making a few small changes, my company can see the outcomes.

4.10.2 Managing Change Summary

The theme of Managing Change emerged from the participant interviews as an influencer of resilience and with the use of digital transformation. One example came from Executive 14 as he told a story about the oil and Gas price crisis in 2015.

I plan, prepare, and execute changes to our company business, including digital transformations, and this has helped our company so much. This strategy has helped my organization properly elaborate the digital transformation's scope and objectives, which made us identify the processes and technologies that needed to be changed. I created a roadmap for implementing changes, engaged employees and my management team in the change process, monitored the progress and corrected where necessary.

Executive 5 shared that despite every effort to invest in digital transformation improve his team's morale, his organization's employee opinion survey only improved by one point. He said this was like a punch to the gut, but it taught him that Change takes time, the changes he was implementing were the right ones, and the payoff would be there eventually.

Digital transformation was a massive undertaking that we did in planning and change management to succeed. With change management, digital transformation projects are likely to succeed. Change management helps our organizations plan for and manage the changes needed to successfully implement a new digital system. It was an essential part of the digital transformation project.

Managing Change related to restructuring is another theme many participants mentioned, which puts organizations under increasing pressure to digitally transform to remain

competitive, especially at the beginning of the COVID-19 pandemic. Executive 13 told a story related to the restructuring and pivoting of the daily work activities of her entire marketing team during the shutdown.

Digital transformation was more than an ordinary modification to business processes for our company. It was transformational because it radically made us rethink our business model and fundamentally changed how we do business. We use digital technologies to create new or modify our business processes, customer experiences and organizational culture to meet our market requirements and ever-changing business climate. Digital transformation affects the entire organization and the company's business strategy. It is more than technology because it requires a shift in how people in the organization work and, ultimately, a cultural change.

Executive 13 was one of many in completely redirected his teams' activities. Many research participants faced similar challenges across the oil and gas industry at the height of the pandemic. The feelings shared by many of the participants was that there was so much unknown at the start of the lockdowns across the world. Executives found themselves with changing narratives that digital transformation is an ongoing process of changing how they do business. It requires total investments in skills, projects, infrastructure and, often, in cleaning up IT systems. It also requires mixing people, machines, and business processes with all the messiness it entails.

4.10.3 Managing Feedback Summary

The next theme that emerged in the participant data was related to Managing Feedback. Participants shared how they managed various forms of feedback and the ways this influenced their resilience. One example of this came from Executive 3. His approach is where you “intercept” customers, asking for feedback on sample rates, behaviour, or customer profile information during the Covid-19 Pandemic. He shared his story as the chief executive of his company.

Feedback forms and customer surveys have been around for decades — first in physical form and nowadays digitally — yet many of our customers show a rather adverse reaction to participate and perceive it as a waste of their time to provide feedback that we rarely follow up on or act upon. Digital transformation is changing this! Pacesetters in the digital arena regularly excel at interacting with customers and users in a highly personalized manner through digital channels and feeding inputs

and reactions straight to our teams, where little development and decision cycles allow for quick reactions.

Executive 14's most significant learning from this experience was that he has been pursuing rather traditional (non-digital) business models that are beginning to act and shape their customer relationships similarly. Executive 14 also further buttress his point.

The role of technology is critical in the customer feedback process, significantly where it can assist companies in obtaining a holistic understanding of the customer's situation and reacting and respond to the customer rapidly and empathetic. With all the touchpoints, channels, transaction history, and various data points from digital interactions, making sense of customer feedback in a meaningful way requires technology.

4.10.4 Organization Summary

The last theme of Organization refers to the oil and gas industry leaders demonstrating specific behaviours related to staying or adjusting to new targets and their actions to achieve them. The first example of this comes from Executive 5, who spoke about understanding the business and being agile with modifying targets for the various teams he supports to achieve the unit rating for his group.

We are not going back to the extensive use of digital services. While we entered the Oil and gas price crisis in 2015 to 2017, catalysed and made worse by the Covid-19 pandemic, we were battling to maintain digital investment to ensure stability and growth against the incompatible budgetary cuts accompanying an economic slowdown.

Executive 8's agile and flexible approach is one example he shared as a behaviour modification that has been adjusted over time based on learnings from experience.

It is a given that short-term survival will always be a priority. A promising future is dependent on an accurate baseline, after all. However, the Covid-19 crisis showed that it was vital to trigger the required investment and actions to attain higher digital maturity to do more than survive. Factors such as cost, scope and schedule, or more intrinsic factors like stakeholder expectations, strategic alignment, or the current state of organizational change, could be barriers to attaining higher digital maturity.

Executive 15 spoke of the importance of organizing her cadence by making lists and using that as her guide to follow up and follow through.

Our heavy investment focused on reforming or reinventing our core infrastructure at a technology platform and operational level. Transformations originate from executive-level directives and affect an entire company or most business units. Our investments focused on both existing and new technologies with opportunities that use new business strategies.

Executive 15 emphasized that her approach is essential and tedious, but it drives consistency, and consistency is what she felt her team needed while working through the COVID-19 pandemic. This concludes the summary of themes identified concerning research question 6 as told through the lens of the participants.

4.11 Conclusion

Chapter 4 was to share and describes the study's findings and results. Inductive thematic analysis and first cycle and second-cycle coding techniques were used to examine the qualitative data (Saldaña, 2015). In Chapter 6, I present analytic interpretations of the findings and discuss the limitations and implications for theory and practice. I will later discuss the next steps and recommendations for future research.

CHAPTER 5: EVOLUTION OF PERSONAL CONTINGENT LEADERSHIP PARADIGM

This chapter expands on the research with the development of a Personal Contingent Leadership Paradigm understanding my present capabilities and the Proposed Personal Contingent Leadership Paradigm that the research findings have led to.

5.1 Initial Personal Contingent Leadership Paradigm

This chapter describes the impact of the DBL program on my PCLP and how my Leadership Critique is structured. The Leadership Critique is how I demonstrate that I have met the requirements of the Doctor of Business Leadership (DBL) program undertaken through the Australian Graduate School of Leadership, Torrens University, Australia. This program is aimed at people with leadership experience who seek to develop their leadership through exploring their PCLP and the opportunities to change and adapt this paradigm. The DBL program consists of four double subjects completed over two trimesters covering Leadership Theory, Critical Reasoning and Ethics, Research Methodologies, and contemporary business leadership issues. These foundation subjects are essential as they build up to the research stage and the work completed via each subject's final assessments provides input into the final Leadership Critique.

5.1.1 DBL 701 and 702

Before I began my study of leadership, I was still determining what a personal contingent leadership paradigm was. Frankly, I was not sure what to expect. I knew that I needed to do it better.

My PCLP is unique to me and is contingent on my environment and experiences. As experience is gained, my PCLP continues to evolve in response to these changes, and as I complete this research, I am continuing to learn new ways of leading during the post - COVID-19. My Leadership Critique and the Supporting Portfolio use twenty-four embedded units of analysis to justify how my PCLP evolved into its current form, recognizing that my journey is unique. Through reflection, a survey, and semi-structured interviews, I have developed my aspirational PCLP. Before starting my research, I developed a model of my starting PCLP, which reflected the first 20+ years of my career and the leadership experiences and growth I had experienced, as shown below. This PCLP is predominantly a transformational style and transactional leadership (role modelling) integrated into my leadership model and a strong emphasis on the importance of resilience against uncertainties.

My values encircle my PCLP, acting as a buffer against some negative aspects of transformational and transactional leadership.

My initial proposed personal contingent leadership paradigm (PCLP) at DBL 701 includes the underpinning of the core values, the selected underpinning leadership relationship, and commercial theories, the purpose of the PCLP was to assist me in making explicit leadership components. This initial PCLP was developed to support my involvement in multiple interactions in a critical reflective journey of self-discovery and make assumptions challenging a complimented by ongoing insights drawn from relevant peer-reviewed literature. This initial stage of the PCLP consists of a set of core values, relational action guidelines, commercial action guidelines, and critical learning feedback loops.

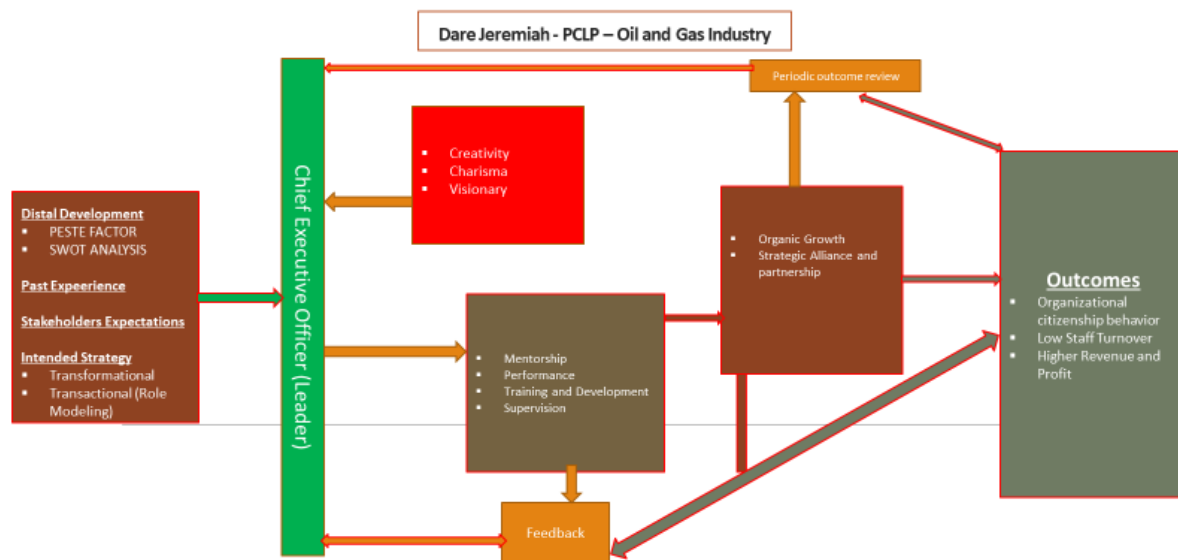


Figure 5-1: My PCLP at the commencement of the DBL program – DBL 701 & 702 (Source: Author, 2020)

This initial PCLP was a process that comprised inputs that determined its desired meaning outcomes to be processed through leadership behaviour guideline process such as its core values, continuous learning, and evolving ecosystem (Murphy, 2020, p. 36). In the following few paragraphs, this paper explains the various processes on the PCLP, starting from input such as distal developments, intended strategy, stakeholder expectations, and learning from the past to my leadership processes such as personal core values, relational guidance process, commercial guidance process which will give desire outputs and outcomes.

Inputs to PCLP

This input is the thing that influences the behaviour of a leader (Murphy, 2020, p. 36). These inputs are relevant to political, economic, social, technological, and environmental developments, highlighting potential threats and opportunities. The intended leadership strategy and the shared evolving business context also impact stakeholder expectations, which are vital to performance improving and adapting the future leadership approach to the emerging business context (Fayed, 2020, p. 3).

Firstly, the possible strength, weaknesses, opportunities, and threats that have impacted my behaviour as a leader in my organization,

- **Strength:** Strong Technology arm with a heavy inclination towards continuous innovation; Global Operations with four Regional Engineering Centres; and Strong Brand Value
- **Weakness:** Highly dependent on the Oil and Gas Price, Negative profit margin and underperforming compared to its competitor.
- **Opportunity:** Partnerships and alliances will help diversify the business
- **Threat:** Covid-19 effect is reducing demand and shrinking markets; an indirect threat to oil prices could result in operational loss, Increased competition in oil and gas.

SWOT analysis will help me build on what will be done well, address what is to minimize risks and lack, and take the most significant probable advantage of chances to be a successful leader (Speth & Probert, pp. 6-7, 2015).

Secondly, the PESTEL framework that influenced the way I acted as a leader is divided into the following segments:

- **Political Factor:** Level of corruption, Legal framework for contract enforcement, International and Security risks.
- **Economics Factor:** Oil and Gas Prices, Exchange rates and stability of host country currency, Labour costs, and productivity in the economy
- **Social Factor:** Demographics and skill level of the population, Culture, and structure in the society.

- **Technology Factor:** Recent technological developments; Technology's impact on product offering; Impact on cost structure
- **Environmental Factor:** Laws regulating environmental pollution, Weather and Climate Change, Recycling and Waste Management
- **Legal Factor:** Employment law, Copyright, patents / Intellectual property law, Health, and Safety law. Data Protection

PESTEL analysis helps an organization identify the external factors that could impact decisions made inside the organization (Marmol, et al, p.8, 2015). These factors seriously impact the leader's behaviour towards decision-making in the organization (Brigitte & Probert, 2015, pp. 10-12). SWOT and PESTLE analyses are used to systematically evaluate a new business or project (Srdjevic, Bajcetic& Srdjevic, 2012, p.3). Srdjevic, Bajcetic& Srdjevic (2012, pp. 4-6). states that better awareness and comprehension of the changes that may occur and the influence that these changes may have on our organization. Both SWOT and PESTLE will have an impact on the PCLP.

Thirdly, stakeholders' expectations impact decision-making processes and leadership styles. There is ever-changing stakeholder expectation, which will impact PCLP and the various stakeholders, such as government, regulatory authority, shareholder, business partners, clients, communities, and employees (Hillenbrand, Money & Brooks, 2020, p. 404).

Fourthly, the intended leadership strategy is based on past leadership style transformational theory and Role modelling part of transactional leadership theory. "The goal of transformational leadership is to 'transfigure' people and organizations to convert them in mind and heart; enlarge vision, insight, and comprehension; clarify purposes; make behaviour congruent with values; and bring about changes that are enduring, self-perpetuating, and momentum building" – Bolden, et al. (2003).

Finally, on the input to the PCLP was the experience which includes both past failures and successes, academy education, Due to the extensive international leadership experience in the major offshore oil and gas regions, with a particular emphasis on Australia Pacific, Middle East, North Sea, South East Asia and West Africa region, and has attended many leadership and management courses globally which include but not limited to International Business from University of New Mexico, USA; International Leadership and Organizational Behaviour from Università Bocconi, Italy and Leadership in 21st Century Organizations from

Copenhagen Business School, Denmark. This experience and education help to build leadership skills and improve leadership attributes to be more effective in the ever-changing complex business world.

Core Values in relations with respect to behavioural guidelines couple with commercial

The core value influences inter/intra-relationship to drive the formulation of an ethical and meaningful personal and shared purpose to be aided by the prevailing behavioural norms and organizational culture (Fayed, 2020, p. 4). Past behaviour reveals the relationship between past adopted core values and those that have guided day-to-day decision-making. However, a gap needs to be identified and addressed (Fayed, 2020, p. 4). Currently, the identified core values closely aligned with the way of life and style of leadership are Creativity, Charisma, and Visionary.

The first core value is Creativity; as the industry changes rapidly and is increasingly complex, Creativity has become a critical concern to survive this uneasiness and uncertainty (Mumford, Hunter, Eubanks, Bedell, & Murphy, 2007, p. 402). The ability to think creatively is a critical skill for people (McCauley, Moxley, & Van Velsor, 1998, p. 439). Being creative has helped to show a creative attitude toward leadership style. This value has continually helped to make creative decisions in an organization (Sternberg, 2002, p. 376). To be effective in dealing with challenges and get solutions that are very appropriate under specific situations (Gardner, 1995). Creativity has a link to relational, commercial, and leadership outcomes in creative problem-solving ability (Mumford et al., 2000, pp. 11-12) and divergent thinking skills. Guilford (1963, pp. 101-102), and evaluative thinking skills/convergent thinking skills.

The second core value is charisma, which this about being endowed with unique qualities and standing out of the crowd. The following are the behaviours needed to achieve PCLP: impression management, articulation of an appealing vision, communication of high expectations, and expression of confidence in followers (De Vries, Roe, Taillieu, 1999, p. 110). Bass and Avolio (1994) make a distinction between four aspects of transformational leadership, namely, idealized influence (formerly charisma), intellectual stimulation, inspirational motivation, and individualized consideration (Bolden et al., 2003, pp. 15-16). This value is a crucial leadership style to achieve an organizational process because transformational leaders may make subordinates independent from the leaders by empowering them (Kuhnert, 1994, pp. 10–25; Yammarino, 1994, pp. 787-811). The

development of associates as a responsibility so that organization will lead to organic growth and maximize its potential, thereby make our organization have high revenue turnover.

The third core value is visionary. Leadership explains what the future should look like, line up with people with that vision, and stimulate them to make it happen despite the obstacles (David, 2014, p. 241). Leroy Eims quoted that a "leader sees more than others see, who sees a long way and before others do" (David, 2014, p. 241). As stated by Kouzes & Posner, 1987, p.32) that "leaders are pioneers and people who venture into unexplored territory; they guide followers to new and often unfamiliar stops. Individuals who take the lead are the foot soldiers in the crusade for change. The unique reason for having leaders – their differentiating function – is to move people forward, and leaders get us going someplace (David, 2014, p. 241). Leader actions inspire others to dream, learn, do, and become more. Strive to recognize the stumbling blocks long before they appear on the horizon (Maxwell, 2007, p. 38). A visionary leader allows leaders to activate, inspire and transform desire into action (David, 2014, pp.242-244). To transform an organization through PCLP, a vision that is appropriate for the organization and its situation (David, 2014, p.244).

My reflection of Paradigm development after DBL 701

There will always be a need to bring the organization back to its initially chosen track by collectively revisiting the ethical values of the organization and then deciding on a suitable strategy to go about achieving it, significantly since the PCLP has been affected by factors beyond the control of the leader like Covid-19. There is a need to adopt an adaptive leadership style coupled with a transformational leadership style. There is also a need to clearly distinguish between changes being made as short-term contingencies to tide over the crisis and those that need to be made to create long-term advantages. This indicates a necessity to improve my communications skills, continuously seek feedback about the leader's decisiveness, risk-taking abilities, and follow-throughs, and consolidate and improve PCLP. PCLP people strategy will focus on building people up, building significance into people/partners' lives, and building leaders for the next generation. Building an organization for "Good Success" means creating a culture that will live on through succeeding generations. The PCLP for long-term organizational focus is to build staff so that they can be helpful to themselves and the organization and finally understand that journey is as important as the destination, and there will be continuous work on leadership skills.

DBL 702 critically reviews my context's impact on my leadership approach in two selected situations about five years apart.

First case working as a leader in the energy industry in the United Arab Emirates, and then I surveyed my leadership behaviours in 2015 through my past subordinates. The second case is in my leadership context as a global leader in the present pandemic. The paper presents two separate PESTEL and SWOT analyses for the two leadership case situations to provide a basis for comparing how your organization's context and internal position affected your approach to leading in each selected case situation.

This paper uses an appropriately structured interviewing method of case study research design and further discusses my research's reliability and validity. I was particularly interested in identifying leadership behaviours considered an essential part of my PCLP and those that were more (or less) prevalent in my industry.

I explored the effectiveness of different leadership behaviour at two companies in different nations, and I surveyed five (5) people, each from two (2) organizations in the oil and gas industry. I was drawn both from my work experience and evolving academic research. The insights derived from the impacts of my context analysis and modifications also explored how I intend to improve my PCLP further and highlight my priority actions.

However, my PCLP stayed the same after DBL702 because I enrolled simultaneously for 701 and 702.

5.1.2 DBL 703 and 704

In DBL 703, I discovered that many factors must be considered in my PCLP before making a critical decision. These factors are relevant to political, economic, social, technological, and environmental developments, highlighting potential threats and opportunities. The possible strength, weaknesses, opportunities, and threats will impact my decision as a leader in the energy industry. PESTEL analysis also helped my PCLP identify the external factors that could affect my decisions as a leader. These external factors seriously impacted my behaviour towards decision-making in the organization. I then understood the importance of stakeholder expectations to my decision-making process. There is ever-changing stakeholder expectation, which will impact my PCLP and the various stakeholders, such as government, regulatory authority, shareholder, business partners, clients, communities, and employees. This will

assist me in improving my leadership attributes to be more effective in the ever-changing, complex business world. Below is my improved PCLP after DBL 703.

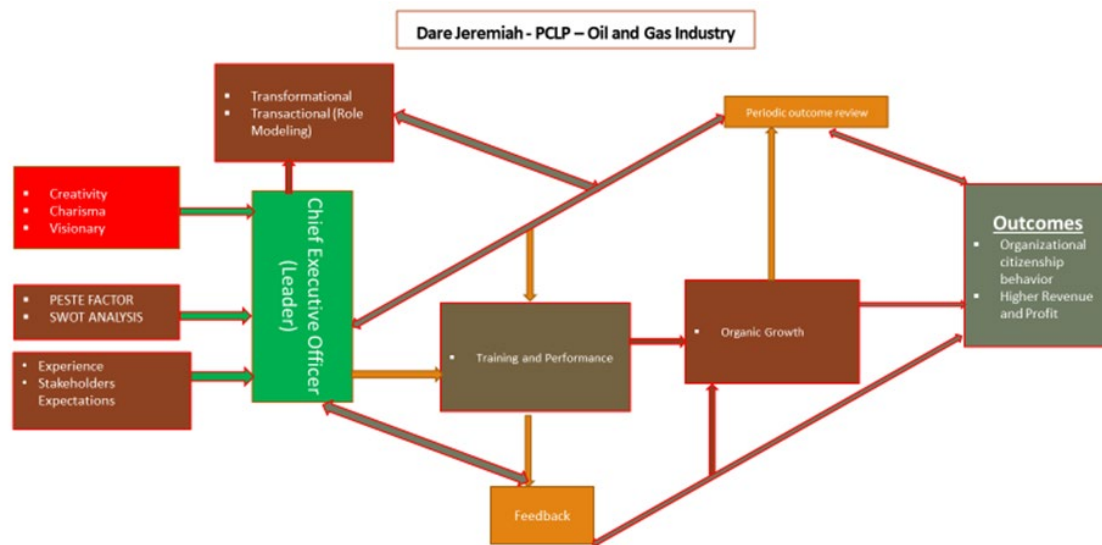


Figure 5-2: My PCLP after DBL 703 (Source: Author 2021)

There always be challenges of change which can either be due to external or internal factors will involve in the change process (decision-making regarding the implementation of the change). To deal with change by determining that change would be an ongoing part of my leadership role, make a commitment to pay the change price, then decide what I was willing to change, and have a realistic understanding of change.

DBL 704 made me investigate details of the strategic arena map of the energy industry and identify and prioritize critical impending leadership issues.

Energy leaders know they operate in VUCA (volatile, uncertain, complex, and ambiguous) environments. What may need to be more apparent are the skills they need to succeed. Given the complexity of the industry — regulatory challenges, geopolitical pressures, and environmental issues are industry hot spots — it can be challenging to know if organizations have the leadership talent they need today and are effectively developing the talent needed for tomorrow.

The study indicated the top priorities for leadership development in the energy sector; as it faces challenges and change, how can it address these leadership priorities? How can the leadership need of organizations best be developed as leaders operate in real-time in the context of regulatory, environmental, geopolitical, and global pressures?

DBL 704 gave me insight into how to derive what modifications from the impacts of your context analysis. I will also explore how it intends to improve PCLP and highlight priority actions. DBL704 allowed me to map the supply and demand systems, emerging issues, uncertainties, and future scenarios concisely.

With rising, highly volatile prices and global energy demand, the oil and gas industry faces increasingly stringent environmental regulations; four significant challenges are Oil and Gas Price, Financing, Regulations and Technology's impact on the product offering.

My PCLP has been affected by factors beyond the leader's control, like Covid-19. There is a need to adopt an adaptive leadership style coupled with a transformational leadership style. There is also a need to clearly distinguish between changes being made as short-term contingencies to tide over the crisis and those that need to be made to create long-term advantages. This indicates a necessity to improve my communications skills, continuously seek feedback about the leader's decisiveness, risk-taking abilities, and follow-throughs, and consolidate and improve my PCLP. PCLP people strategy will focus on building people up, building significance into people/partners' lives, and building leaders for the next generation. Building an organization for "Good Success" means creating a culture that will live on through succeeding generations. The PCLP for long-term organizational focus is to build staff so that they can be helpful to themselves and the organization and finally understand that journey is as important as the destination. There will be continuous work on leadership skills. Below is my improved PCLP after DBL 704.

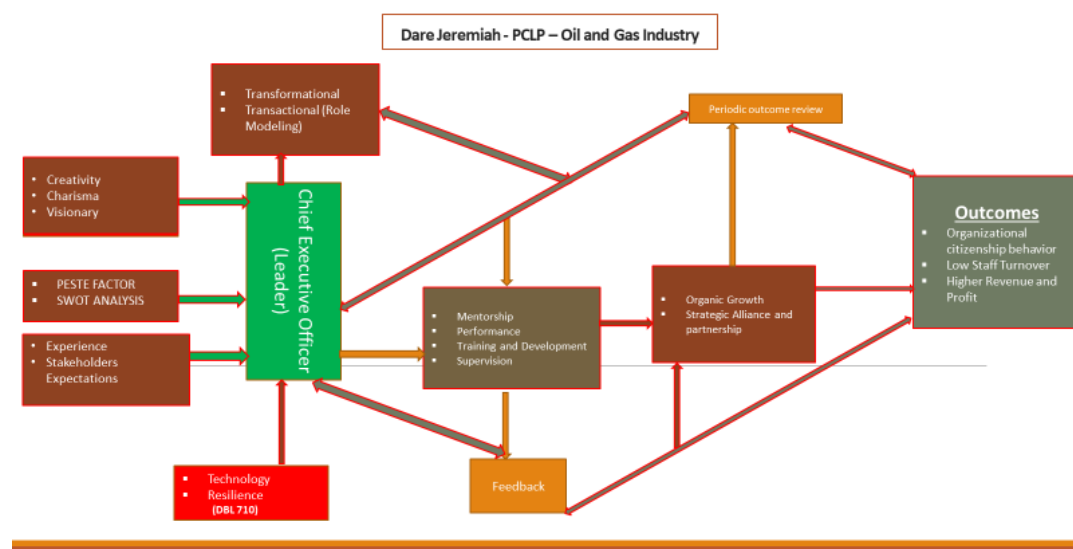


Figure 5-3: My PCLP after DBL 704 (Source: Author 2021)

5.2 Proposed Personal Contingent Leadership Paradigm

After considerable self-reflection, ongoing review during the first four modules of the DBL and the research conducted in this Critique, I was able to establish a proposed Personal Contingent Leadership Paradigm that will enable my capability as a leader to grow, deliver the outcomes I need with the rapid adoption of resilience in oil and gas industry. A pivotal piece of work that qualified the creation of my proposed Personal Contingent Leadership Paradigm was the strategic arena process shown in Figure 2, which I conducted in module DBL704, allowing me to concisely map the supply and demand systems, emerging issues, uncertainties, and future scenarios. This body of work provided a methodical review of what the next ten years may hold in the oil and gas industry sector and the challenges that we may be faced with a degree of certainty in forming a foundation. This process was pivotal to changing the logic applied to my leadership requirements when coupled with the research work in this Critique shown in Figure 5-4.

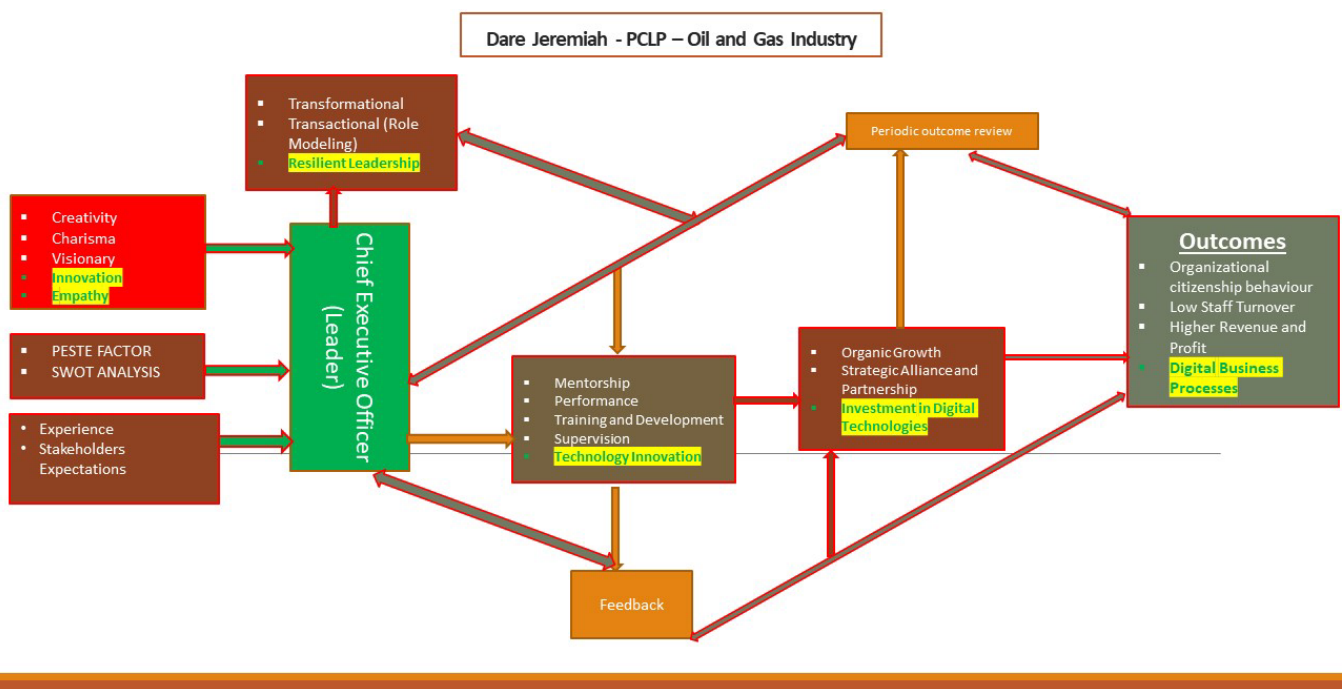


Figure 5-4: Proposed Personal Contingent Leadership Paradigm

For comparison purposes, Table 6 was compiled to show where my initial and proposed Personal Contingent Leadership Paradigm has evolved after incorporating the findings from the research conducted in this Critique and the Leadership Portfolio developed in parallel with this work.

	Initial PCL Paradigm	Proposed PCL Paradigm
Personal Core Values	Creativity, Charisma, and Visionary	Creativity, Charisma, Visionary, Innovation and Empathy
Theoretical Underpinning	Transformational and Transactional (Role Modelling)	Transformational, Transactional (Role Modelling) and Resilient Leadership
Relational guidance process	Mentorship, Performance, Training & Development and Supervision	Mentorship, Performance, Training & Development, Supervision and Technology Innovation
Commercial guidance process	Organic Growth and Strategic Alliance & Partnership	Organic Growth Strategic Alliance & Partnership and Investment in Digital Technologies
Outputs and outcomes	Organizational citizenship behaviour, Low Staff Turnover and Higher Revenue & Profit	Organizational citizenship behaviour Low Staff Turnover Higher Revenue & Profit and Digital Business Processes

Table 5-1: Personal Contingent Leadership (PCL) Paradigm Comparison

The green items in Table 6 represent the significant departures from my initial paradigm that centres on developing innovation and Empathy as new core values. Innovation is something new, like an invention or the business practice of developing and introducing a new system. Empathy will enable me to listen and consider others' thoughts and feelings by appreciating their perspective before passing judgement or acting; this strengthens my leadership resilience. This approach has allowed us to foster stronger relationships with one another as a

Franco family and create impactful connections with our client, shifting to a theoretical underpinning of resilient leadership to account for my present and future circumstances.

My Relational guidance process reflects these fundamental changes and establishes the behaviours that will support this change based on the research conducted in this Critique. To enable my resilience behaviours, I have ascertained that I will also need to add technology innovation and then grow my formal feedback loops to those outside of my network already in this field in other businesses as a steward for introducing my experience to other industries, but also to help challenge my enterprise-centric views.

There is also an implied dependency of this work on the company I am working for being able to accommodate these changes.

There will be significant Investment in Digital Technologies which will see an incremental change in my initial Personal Contingent Leadership Paradigm. Based on the findings of this research, Digital technologies readiness in the oil and gas industry will significantly impact resilience development.

This evolution will seek to add Digital Business Processes to the outcome to use digital tools, technology, and ecosystems to provide more value for customers and clients, usually through new customer experiences, solutions, and business models. A core piece to this work is to share my learnings from this Critique within my industry so we can establish a good understanding of the changes we face implementing and operating within complex resilience systems in the oil and gas industry.

There is an inter-dependency from this finding for change within my company, customers and in time across the oil and gas sector.

CHAPTER 6: DISCUSSION AND IMPLICATIONS

This chapter will discuss the interpretation of the findings and their implications for leadership theory and practice. Progressing from work in Chapter 2 on leadership theory, coupled with the case research in Chapter 5 and subsequent personal leadership paradigm in Chapter 5, this chapter is centred on providing a set of guidelines for the practical application of these pieces of work when overlaid with each other. As in Chapter 4, quotes directly from the participants will be shared throughout the chapter to support my findings, which can include quotes previously used in Chapter 4

A desired Personal Contingent Leadership Paradigm was created by utilising a foundational understanding of leadership theory coupled with longitudinal case study research. The leadership practice guidelines embody my Personal Contingent Leadership Paradigm, providing a construct to apply these findings to my everyday leadership, evolving with purpose and adapting over time to remain relevant in my career path.

6.1 Discussion Overview

In Chapter 1, I proposed building leadership resilience for short- and long-term responses to the pandemic (Covid-19) and using the emergency response as an opportunity to create long-term resilience in the oil and Gas Industry. To support this assertion was to identify the specific behaviours and characteristics of resilient leaders at the executive level of leadership in day-to-day functions during the Oil and Gas Price Crisis and Covid-19 pandemic crisis events and how this has changed for the participant over time. The inductive qualitative research was to understand what influences and shapes different forms of resilience in Oil and Gas Industry leaders and what techniques and learning practices can proactively cultivate resilience in the future of leaders prior to an organizational crisis or disruptive event in the future.

Question one was to understand how resiliency is demonstrated by oil and gas leaders in day-to-day functions and during the Oil and Gas Price Crisis and Covid-19 pandemic crisis event and how this has changed over time. Question two was to understand the specific behaviours and characteristics of resilience in leaders in the oil and gas industry in day-to-day functions during times of disruption and crisis and how that had changed over time. Question three examined how emerging technology an enabler of resilience in the oil and gas industry can be. Question four examined what influences and shapes different forms of resilience. Question five sought to identify techniques and learning practices to proactively cultivate

resilience in the next generation of oil and gas industry leaders. Moreover, the sixth question examined how the executives are prepared to spend more money on digital transformation. The research study consisted of 10 open-ended behavioural-style questions, administered virtually to 15 participants between February and June 2022. The participants who contributed to this section represented executive levels of leadership which comprised men and women from the oil and gas industry.

6.2 Findings and Implications for Practice

Chapter 4 outlined the results of the thematic analysis with the identification of a total of 12 themes and 56 subthemes across 1,278 data points. The data from the study was robust, and the following section will review my further analysis of the results, which led to five primary findings. The following five findings will be reviewed in detail in the next section, and their implications for practice.

Finding 1: *Behaviours and characteristics of leader resilience are identifiable and are a combination of professional and personal skills, practices, and experiences.*

Finding 2: *The consistent business practices and corporate culture embedded in the oil and gas industry significantly impact resilience development.*

Finding 3: *Resilience in leadership plays an essential role in steering the organization during the oil and gas price crisis and the covid-19 Pandemic.*

Finding 4: *Developing Leadership Skills before an organizational crisis or change event will better prepare it to bounce back with strength and resolve while suffering limited dysfunction or loss of momentum.*

Finding 5: *Adoption of digital technologies readiness in the oil and gas industry significantly impact resilience development.*

The following section builds upon the results from Chapter 5 and is my further interpretation of the themes and their relationship to each of the five findings.

Finding 1: *Behaviours and characteristics of leader resilience are identifiable and are a combination of professional and personal skills, practices, and experiences*

The study consisted of 15 participants with varied personal histories and professional experiences. Despite the range of diverse backgrounds, there were similarities in characteristics and behaviours of leader resilience that emerged and were identified in

Chapter 5. Identifying characteristics and behaviours in resilient leaders has numerous implications for building leader resilience. This section elaborates on the themes and subthemes associated with finding 1.

Overcoming Personal Crisis - This theme focused on four subthemes: Health Crisis, Lost Relationship, Economic changes, and Family disruption. Several participants shared personal stories of challenges they overcame and how their resilience developed or manifested due to the crisis they were experiencing. In all the participant stories, the endurance of experiencing a personal crisis is emblematic of not having a choice.

Most participants shared a similar theme: they had to weather the storm they were facing. In terms of the role that managing a personal crisis had on them as leaders, and if it influenced their resilience, there was a clear link between them. Most participants believed their experiences of managing these difficult situations to some degree informed how they managed and led people in times of professional disruption or crisis. Examples such as becoming more empathetic and connecting with their teams on a deeper, more personal level correlated with experiencing something life-changing for themselves.

Managing Change - The theme of *Managing Change* comprised five subthemes: headcount changes, restructuring, career progression, managing a struggling business, and decision-making. The theme emerged in answering research questions 1 and 2. Managing change as a leader is nothing new. Most industries are in a constant state of change; the oil and gas industry are no different. The opening paragraph of this discussion addresses change and its pace. Managing change during the oil and gas price crisis and the Covid-19 Pandemic takes on a higher purpose. What the world faced at the beginning of the COVID-19 Pandemic gave a new definition to change management. The oil and gas industry are built on direct customer relationships, and business interactions are generally conducted more face-to-face. In 2 weeks, most oil and gas companies had to move their meetings from face-to-face interactions to managing business remotely. Operation and leadership's part in conforming every company is representational of flexible leadership. In day-to-day functions, managing change can be addressed by any number of change operation fabrics. In the oil and gas price crisis and Covid-19 Pandemic, those frameworks only sometimes apply. In observing the behaviours of various oil and gas industry leaders during the oil and gas price crisis and Covid-19 Pandemic, they have led their responsible groups through significant change initiatives. It is clear that the oil and gas industry are resilient because it has made up of

resilient leaders. The research conducted by Lane et al. (2013) supports this interpretation and the concepts of resilient leadership and organizational change management.

Managing Feedback - The theme of *Managing Feedback* comprises three subthemes: Difficult Feedback, Client Feedback, Partner Feedback and Employee Feedback. Like managing change, the theme of managing feedback emerged in answering research questions 1 and 4. Several of the participants shared stories of how receiving critical or complex feedback shaped them or taught them lessons on how not to respond. Others received difficult feedback and used it as motivation to improve themselves and prove otherwise. From this view, it is essential to recognize how these colleagues felt when given feedback. What was the effect on their motivation? Did it accelerate their performance, or did it have a derailing effect? Feedback is a critical element in assisting leaders with their development. How it is delivered can have various impacts on team member performance.

Emotional Intelligence - The theme of *Emotional Intelligence* comprises four subthemes: self-awareness, social awareness, self-management, and relationship management (Goleman & Boyatzis, 2017). The theme of EI emerges in research question 1, research question 2, and research question 5. Several participants referenced EI throughout their interviews. The attention paid to developing this competency was critical for some leaders, especially during a crisis. The importance of being able to manage one's emotions, especially under stress and pressure, is a behaviour that is critical for a leader. Another example shared was the importance of demonstrating a more profound empathy with one's team members, especially during the COVID-19 Pandemic. The impact of isolation and lockdown on people is widely different. In terms of the responsibility of a leader and how it relates to resiliency, the literature supports the notion that there is a link between someone regulating and managing their feelings and responses and having a resilient personality (Bande et al., 2015).

Leader Communication - The theme of leader communication comprises six subthemes: clear, transparent, inspirational, calm, absence of panic, and visionary. The theme of leader communication surfaced in exploration question 1, specifically in the environment of extremity operation. The emergence of leader communication was shared throughout many of the interviews. The importance of leader communication was echoed in responses relating to various disruptions, including how the previous oil and gas industry executives communicated to the organization through the oil and gas price crisis and COVID-19 Pandemics. In addition, many participants gave examples of leader communication from the

organization's sole shareholder during the oil and gas price crisis and COVID-19 Pandemics and how it has had a tone of soberness balanced with his and his family's commitment to the long-term vision and success of the company. In addition to the leader communication, participants often mentioned the communication examples they demonstrated. The clarity of direction, the calm demeanour, and the absence of panic from their leader's communication-built confidence and trust in the participants that the company would face forward and find an avenue together as a team through the extremity.

Mindsets - The theme of mindsets comprises five subthemes: authenticity, transparency, determination, perspective, and gratitude. The theme of mindsets emerged in research questions 1 and 2. My interpretation of the theme of mindsets is that leaders in the oil and gas industry need to be conscious of the mindset with which they approach challenges and problems. It is the same as facing day-to-day challenges outside the oil and gas price crisis and the Covid-19 Pandemic. The need for leaders to adjust their perspective and show up as authentic leaders is a critical leadership behaviour. Being able to shift one's thinking away from the stressors of worrying about what is yet to happen toward focusing on what you can control is an important capability shared in the participant interviews. The demonstration of this behaviour was shared by many of the participants as they shifted their perspective at the beginning of the COVID-19 Pandemic.

Organization - An organization's theme comprises five subthemes: list-making, note-taking, communication, living the culture, and understanding the business. The theme of organization emerged in research question 2.

Several participants shared stories about the importance of taking notes and staying on track to lead their teams with clear, consistent direction. This theme is also essential in day-to-day leadership activities. Staying on the message and remaining on point requires focus, a clear understanding of what one wants to communicate, and a strong understanding of the business. I see a link between the theme of organization and adjusting leadership style. Leaders who demonstrate clarity of direction typically can adjust their leadership style as needed to meet their team members where they are at that moment and can adapt to the environment around them. The participants I interviewed demonstrate this through target setting, day-to-day coaching, and note-taking during meetings.

Adjusting Leadership Style - The theme of adjusting leadership style comprises seven subthemes: Directive, More Personal, Coaching, Situational, Focus, Empowering and

Seeking Feedback. The theme of adjusting leadership style appeared in Research Question 1. As I interviewed the participants and the theme of leadership style began to emerge, I noticed that most participants were reflecting on how they adjusted their approaches to meet the moments they were in. For some, this was how they responded to the relocation and adjusted be there on a more personal level for those who were asked to move. Other illustrations shared by the participants were the shift in getting more instructive vs. collaborative, especially during the oil and gas price crisis. Some of the process requirements of the job that would often be forgiven for not being completed in exchange for solid sales performance were now at the forefront of focus due to a lack of sales. The directive style resurfaced again at the beginning of the COVID-19 Pandemic. Many participants shared their experiences of ultimately shifting their leadership style from supporting and enabling to highly directive, as the very nature of people's jobs changed overnight. Behaviour modifications for leadership styles are essential to the success of a leader in the oil and gas industry. Especially when one considers the COVID-19 Pandemic, which has forced many into isolation, it is now more critical than ever for leaders to not only manage the business but also to check in on the well-being of their teams.

Continuous Learning - The theme of continuous learning comprises five subthemes: failure, reading, webinars, training, and workshops. The theme of continuous learning emerged in research questions 3 and 4.

The participant illustrated with stories throughout the study often referred to the importance of continuous learning. Specifically, many senior leaders recalled learning from failures they had overcome and challenges they had met. The sense from several participants was that there was no better teacher than experience and experiencing a disruptive event or crisis event was the best classroom for learning. The second-way leaders developed resilience was through case studies and simulations, which helped them respond during a crisis. Another influential teacher was the experience and reflection related to failure and being allowed to fail. There is a much wider acceptance today than in years past to encourage people to try; and, if they fail, to stop, reflect, and try again.

The behaviours and characteristics identified in these ten themes are not an exhaustive list. However, they reflect common themes and the combination of professional and personal skill sets. These practices and experiences are emblematic of a diverse pool of participants and

offer a roadmap to enhance the learning curriculum, which will be further reviewed in Finding 4.

Finding 2: *The consistent business practices and corporate culture embedded in the oil and gas industry significantly impact resilience development.*

Innovation is vital in enabling oil and gas companies to create and maintain a competitive advantage (Baregheh et al., 2009). The survival of an organisation in the rapidly changing global complex environment is increasingly contingent upon its ability for continuous improvement. The oil and gas industry consistently builds global business processes, practices, and strategies while cultivating a people-centric culture. This commitment led to why the energy industry employed a more ongoing and deliberate approach to creating an organisational culture that encourages and rewards innovation. The solutions to many of the ongoing challenges it faces may very well lie within. Some participants illustrated their experience with the culture and how that informed their beliefs that they would be okay through past and current crises. Below are a few participant quotes that support this finding.

The organization impacts resilience through the culture, then, I guess, because all that shapes the culture, how you compensate, and how you reward. The cultural norms are really what enables that resilience to show up. So, if you have an organization that has an awful culture, you are going to have all that show up (Executive 2, 2022).

I return to the culture right that it created, and those people have stuck around. They have been through good years and bad years. We have been through the oil and gas crisis in 2015-2017. So, all that shows that culture is one of the fantastic things you want in any organization. That goes precisely to this resilient concept and back to determination and stamina (Executive 3, 2022).

The atmosphere that's created that I do not create on my own. The atmosphere that we create in the company is what people will remember. Moreover, I am very proud of the atmosphere we have created so far. It is not an atmosphere of fear, but also an atmosphere of false optimism that, hey, do not worry about it, everything will be very sober, and it is the right balance, in my opinion (Executive 7, 2022).

Culture being identified as one of the critical shapers of resilience is shared by most of the participants. The underlying confidence that came with knowing that the company had a

shareholder more interested in long-term sustainability than short-term profit gain gave the participants the confidence and psychological safety to focus on their jobs. I did not hear participants talking about apprehensions of losing their job during the oil and gas price crisis or the COVID-19 Pandemic.

This finding revealed that strategic resilience, organizational flexibility, and managerial culture have significant and positive relationships with organizational culture in the Oil and Gas Industry while has not significantly impacted the organizational culture in the Oil and Gas Industry. This provides that strategic leaders of the oil and gas industry must build and improve strategic resilience capability. The oil and gas industry leaders should encourage the widespread use of formal and informal organizational flexibility as a strategy to meet business and individual needs and a good culture for sustainability. The findings provided insight into management thinking regarding strategic drift and organizational culture in the developing economy's oil and gas industry.

Most Participants gave clear insights into a strategic drift and organizational culture in the Oil and gas sector. The executive leaders of the oil and gas industry are to look inward regarding strategic thinking, choice, and decision-making in the organization. Plans should be on the ground to avert any issue of strategic drift through improved organizational culture and for the company's sustainability. The practical implication is that some participants offered some suggestive policy recommendations: Leaders of the oil and gas organization need to build and improve on strategic resilience. They should reduce generative doubt, firm slack, and broad mindful engagement since it has a significant and positive relationship with organizational culture; Leaders of the Oil and Gas Industry should encourage the widespread use of formal and informal organizational flexibility as a strategy to meet business and individual, organizational culture for sustainability in the company. The Oil and Gas Company leaders need to ensure that leadership culture is essential for the company's success. Furthermore, it also gives room for a better results driven.

Finding 3: *Resilience in leadership plays an essential role in steering the organization during the oil and gas price crisis and the covid-19 Pandemic.*

The study examined the role of resilience during two events: the oil and gas price crisis of 2015 to 2017 and the covid-19 Pandemic crisis of 2020. During these two periods, leaders' ability to lead with sound business practices, a clear plan, and consistent communication played fundamental roles in weathering unforeseen circumstances. However, the study

revealed that in addition to the leader's directives, leader resilience was also crucial in successfully steering the industry through each of them.

The oil and gas price: The oil and gas price crisis of 2015 to 2017 was an internal crisis that was technically and politically controlled within the Oil and gas industry through OPEC with other external factors that impacted the oil and gas industry market. OPEC responded to that crisis by taking critical steps to secure the long-term sustainability of the oil and gas industry.

The industry took advantage of this time to sharpen the processes and prepare it for a strong rebound by sharpening our approach to oil and gas market forces of supply and demand. One of the industry's significant challenges is producing crude oil and refined products at a lower cost to stay competitive. Optimizing production systems and environmental utilities on currently operating sites is a priority for the oil industry. This maximizes production efficiency, reduces extraction and refining costs and offsets exploration costs (Mayor, 2021).

Global oil and gas leaders are being compelled to view substitute patterns to acclimate to their people's requirements and safety, acclimate business operations and models, and satisfy evolving client demands so that they can ultimately return to stability and, eventually, growth. In the short term, they must determine what immediate actions need to be taken to survive this turbulent period (Mayor, 2021).

Several large oil and gas companies announced spending cuts, dividend reductions, or hiring freezes, and some have started paring down staff—low prices, commoditization, and declining exploration.

The following is an excerpt of illustrations shared by a few participants and their reflections on how they led and acted during the oil and gas price crisis.

We could not accept that we were in this oil and gas price crisis and that there was nothing we could do. There were things we could do. We still had people working, and we still had opportunities to engage customers in specific ways. We still had to do our jobs. Some people were struggling, and we had to help them through it. I had to adapt, and I had to change (Executive 4, 2022).

Before the oil and gas price crisis, I could have done more for my people. However, when the crisis came about, and we were all working, everything was getting hard. I saw that brought us closer and made us more of a team. Moreover, I took that philosophy going forward (Executive 9, 2022).

Significant learning for me was that you start to see who your good people are and who the good managers are in times of crisis. Like, at that time, we had a director. Moreover, I still remember he was a very panicked type of director, and it was black and white. There was minimal grey, you know, it was like, you could feel the panic in every communication with him. For me was great learning; it was my first crisis to manage through, and just seeing how everybody takes it differently. How they take the information and either blow it up or deflate it, you know, what, what you are doing and what your actions are. Furthermore, keeping them focused on goals and their activities and things they can control, at least from my perspective, is helpful (Executive 13, 2022).

The most significant learning I had during that time that changed how I managed was prioritising my time with my people and what mattered and what did not in terms of just the coaching relationship I had with people. Being empathetic that, you know, just because you are missing your plan four quarters in a row does not mean you are a terrible person or that you do not know how to do your job (Executive 15, 2022).

COVID-19 pandemic: COVID-19 dramatically affected every industry worldwide, and the many efforts to mitigate the spread are disrupting global markets. COVID-19 is creating a remarkable demand destruction event for oil and gas, given multiplying travel restrictions and quarantines. The adverse effect on universal growth remains to be viewed. Like company leaders across all industries, oil and gas executives are concerned about observing their personnel sound while grooming for the possibility of enduring demand decline due to business and school shutdowns, stalled economic expansion, and many other related disruptions to everyday life. Their precedence are safety, business durability, and job security. The executives tried to mitigate risk, manage costs, preserve cash quickly, and test technology capacity for remote work capabilities.

This research aimed to prepare leaders for future crises and disruptive events. The following few paragraphs are an excerpt of stories illustrated by most participants as they responded to the impact of the COVID-19 crisis and how their communication and way of working hours.

We learnt how to deal with this new situation. We talked through how things were going but also shared success stories and struggles, professionally and personally. We must come together as a team and share this experience (Executive 1, 2022).

I focused on the big picture and what we were trying to accomplish. Our steps were to accomplish our goals (Executive 3, 2022).

Because we survive the downturn, we need to prepare for a very different kind of future, one in which volatility and uncertainty around demand will rule the day (Executive 7, 2022)

The Covid-19 pandemic has really opened the eyes of all industry stakeholders and we have all been forced to do things differently (Executive 5, 2022)

Well, motivating virtually is, was one challenge. Keeping our directive somewhat fluid was another one. Furthermore, that one is difficult because, you know, it was a hectic time, and our teams were not used to virtual meetings. They were not. Moreover, we only gave a directive for one week to refine or change it a few days later. Moreover, the teams must respond better (Executive 6, 2022).

I was spending much time with the team, telling them about why things were happening, more uplifting messages and ensuring people felt safe. We were going to support you and have done this before. Moreover, we have worked through this before (Executive 8, 2022).

I was very in tune and empathetic as a leader, not that I was not empathetic before, but now to a different level. I listened, acknowledged, and then asked how I could help. Not just with the work stuff, but what could I do just human to human? This crisis brought people together, even those who were just business colleagues, in a way that created a different connection (Executive 10, 2022).

I have had to change my willingness and ambition to be visible to more people. I recognized in a time like this, especially when things were terrifying, the need for the CEO to be out front and visible, going over multiple levels of the organization to communicate directly to all my team members in a succinct, clear, transparent way. I was comfortable with transparency, though I usually limit my interactions with everybody and enable the management teams to communicate with the teams. I had to increase the tempo and the spanned of how much I communicate directly with the client. I had to adapt to people's expectations or needs during the period (Executive 11, 2022).

I had a lot more communication during the crisis, and it was good. It helped me to be fully aligned with my team. When things are good, you can allow your teams to be more entrepreneurial in their approach. However, in a crisis, when you have revenue dropping at such a fast rate, you must be more directive on what the expectation is and then enable them to operationalize it. Hence, they remain motivated and feel part of the plan (Executive 14, 2022).

There were some silver linings to the COVID-19 crisis because the pandemic was new. I experienced it in real-time, both as a scholar and a practitioner, and continue to see the impact even during this post-covid -19 era. Understanding and gauging the challenges oil and gas industry leaders faced and how they developed resilience was a fascinating period of discovery. For the oil and gas price crisis from 2015 to 2017, it was a matter of making decisions and sticking with them and bringing as many people as possible along through clear communication, thoughtful planning, and making time to understand every impacted person's personal needs. During the oil and gas price crisis from 2015 to 2017, the oil and gas industry had able employees who needed direction and support to find new ways of achieving the industry's objectives. The leadership team adapted and adjusted their leadership style to bring their teams through the crisis. The following section will review finding 4 in the research.

Finding 4: *Developing Leadership Skills before an organizational crisis or change event will better prepare it to bounce back with strength and resolve while suffering limited dysfunction or loss of momentum.*

Building resilience in leaders is possible by having strong business practices, supportive culture, and integrating resilience into traditional learning program formats, including coaching, simulation, and classroom learning. Though traditional approaches will contribute to building resilience in leaders, it is also vital that additional actions are infused in other business areas to further develop resilience in all leaders of the oil and gas industry. There are many options throughout the 11 themes and their subthemes. The following section explores a sample of how this can manifest.

Failure was a subtheme of both the Continuous Learning theme and the Resilience Shapers theme. Creating a learning culture moment through failure and reflection are essential aspect of leader development. As reviewed in Chapter 5, the participants echoed that one of the best possibilities to learn resilience was to come back from failure. Executive 3 shared his insights on environments where failure is well practiced.

Everybody has got to learn how to fail forward. Thus, I love my position as Chief Executive Officer, a cultivator of leaders, because I always advise my team manager that they need to know how to fail forward, which means that when they fail, they learn from the failure and relaunch.

A base learning platform could proactively develop simulations and case studies requiring leaders to fail and recover. Executive 5 shared his insights into a development program he attended in Melbourne, Australia.

Model training, something like crisis or stress management and conflict resolution, which deal with the individual, as a team, as a downturn in business. I participated in a business Stress management when I attended a leadership development training in Melbourne, Australia. This model was five days, and it was impactful. Every three hours, they would give us a new crisis or disruption to proffer a proposed solution, dealing with toxic staff, a separation of a business leader, leadership issues, etc. We had a brainstorming session to figure out how do we fix it. We are different business leaders from different industries, and we switch up the job rolls around the team every three hours.

These methods created safe spaces for leaders to fail and learn from it. Their experience differs when a failure occurs on the job. Leaders believe the way to learn is by someone failing, reflecting on what they learned, and moving on with the lesson learnt; however, some team leaders may have differing insights. Therefore, it is essential to not only talk about failure but also equip the team leader with the appropriate coaching tools to provide feedback, reflection, and growth from their team member's experience. If the feedback gets delivered in a disrespected way, the risk increases that the team member will not learn from the failure.

The theme of *Leaving Home* was predominant, as 10 of the 15 participants had relocated for work either domestically or internationally.

Executive 9 shared the impact that relocating to another country had on him.

My first move to Abu Dhabi, United Arab Emirates, was, you know, a very defining moment for me. Moreover, one that I know in hindsight almost broke me as a person, professionally and personally. Ultimately, I emerged from the experience much more vital than ever before. In a conversation with a colleague, he mentioned that the most

significant stressors in your life are the death of a close family member, divorce, and moving to a different continent. Moreover, he was like, you know, just putting things in perspective, but he says that you know what you are feeling is real. I think he was permitting me to say that a lot is going on, right? This is a very stressful time in your life. So, it is okay if you are not feeling you know your best.

Executive 11 shared his story about the challenges of a culture shock when he moved to the United Kingdom.

"The move to the U.K. was way more challenging than I thought it would be. Because, for goodness' sake, I came to a job, right? I spoke the language. I had a home. What could go wrong? I would almost say the reality of the loneliness, new culture, homesickness, and the lack of herd, or like a tribe. I was moving away from my communal culture and trying to integrate into a new tribe, which was stressful (Executive 11, 2022).

Executive 13 shared a similar illustration about his relocation to the Malaysia from Perth, Australia.

I remember when my first month in Kuala Lumpur, Malaysia. It was tough for me, you know, coming home trying to grow but then, you know, working through it and learning from it and adapting and understanding what to do and understanding the situation, then over a period, you know, the building I think all these events, those are probably the biggest ones. It helped me become more resilient and adapt quickly to a new environment.

The oil and gas industry has excellent relocation packages, such as relocation allowances and partnering with travel agencies. However, based on the number of moves, both domestically and internationally, the packages can include coaching and mentoring support on the cultural and personal experiences related to relocation. Human Resources sections partner with other consultancy firms to help build best practices and share resources for cultural and personal integration support for colleagues relocating into a new community, culture, or country.

Vulnerability was a subtheme of Resilience Shapers and was mentioned by most participants as instrumental to the development of resilience. A vulnerability was critical in determining what shapes and influences resilience and in being a technique and learning practice to help develop resilience in future leaders. Most participants did not believe you could be resilient without vulnerability and consciously acknowledging one's vulnerabilities. The following

quotes share the collective thoughts of five participants and their views on vulnerability and its influence on resilience.

Like an actual test of resiliency, you must make yourself vulnerable at some point because it is what you rebounded from" (Executive 4, 2022).

You start with self-reflection; you need to show resilience when you overcome your vulnerabilities in some form because, as I just said, exposure is most painful to honesty in yourself. Moreover, when those things are shaken, that is when it is, this is hard. It would help if you had the resilience to move on (Executive 6, 2022).

I use much vulnerability when I am talking with my team. I let them know that things scare me and that I am worried about them. However, I also let them know about the things I am not scared or concerned about. Moreover, if you just come to a team and say, I am fearless; there is nothing that keeps me up at night, people will not believe that because no one is fearless. When I am talking with people, I say, this is a safe space, but you need to put something out on the table to make it a safe distance. It is just a one-way street. So, you must, you know, you got to show your cards for the other team member to feel comfortable revealing their cards (Executive 9, 2022).

Resilience also means growth, right? Because you cannot be complacent and be resilient at the same time. Furthermore, to grow, you got to be vulnerable and take feedback and change. Moreover, put yourself all out there, you know, to fully receive it (Executive 13, 2022).

Resiliency is when your weakness gets uncovered or pressed on how you respond. If you are entirely immune to anything, then you are not resilient. You are immune. The resiliency that the button that's pushed in your personality might trigger all these emotional responses. However, you are resilient, and you know that. Moreover, you take a step back and respond in a much more productive, controlled way. You do not overreact. That is resiliency (Executive 15, 2022).

Creating a culture of failure and reflecting on it will also develop a culture of vulnerability. Creating an environment where team members can expose and reflect on their vulnerability and learn from them will further enable moments to fortify their resilience. Failing forward, relocation and vulnerability are just three examples that support Finding 4. Resilience relies on various skills and draws on various sources of help, including analytical thinking skills,

mental, physical and health, and leader relationships with those around the leader. Resilience is not really about overcoming enormous challenges; each of us faces challenges daily for which we must draw on leader reserves of resilience. Facing challenges and responding appropriately can require us to draw on all internal and external resources, including our relationships. The good news is that improving resources can help to develop resilience, and there are several ways in which we can do that. Leaders have a greater responsibility during these trying times and must be resilient to emerge victoriously. The best and most challenging individuals understand that Leadership Development Solutions are investments for themselves and their businesses.

Finding 5: *Adoption of digital technologies readiness in the oil and gas industry significantly impact resilience development*

The digital technologies used by firms in conducting different essential business functions in the oil and gas industry- business administration, production/service planning, marketing, supply chain management, sales, quality control and payments. This is combined with information on whether the industry improved digital technology during the oil and gas price crisis and the Covid-19 pandemic and their respective sales performance.

Several characteristics of the firm were observed, such as age, size, foreign ownership, exporting status, manager's human capital and managerial practices that could simultaneously influence digital adoption and performance of the oil and gas industry.

The following is an excerpt of illustrations shared by a few participants and their reflections on how digital technology readiness helped firms offset some of the initial negative impacts of the oil and gas price crisis and Covid -19 pandemic directly and indirectly by facilitating the use of additional digital tools.

Both the human capital of the manager and the management practices determine the capacity of the business to adjust to the COVID-19 shock. (Executive 1, 2022).

Our business declined in sales during the early month of the COVID-19 pandemic. They exhibited a higher probability of using or increasing digital technologies. Our primary digital adjustment was starting to increase the use of digital platforms. At the same time, comparatively lower fractions of our business invested in new equipment,

software, or digital solutions, and we increased home-based work or higher fractions of online sales (Executive 4, 2022).

The pandemic has taught us that we cannot sit still in adversity. Fast responses are essential to a resilient organization with a sustainable business strategy that retains its uniqueness and relevance as times and market conditions change. (Executive 7, 2022).

Some of our most challenging obstacles to implementing digital transformation were internal. It is better to prepare specific action steps and plans to address a disruption's effects (Executive 9, 2022).

We got our solution by reviewing precisely what our company wanted to do and then determined how to focus on doing our best. We built our company through the provision of technology solutions. We went for the use of outside ecosystems and partnerships with Salesforce. This transformed our company, leaving us to focus on maintaining the competitive advantage that made us thrive. (Executive 11, 2022).

We invested in a process that is well-designed and well-defined to support adequate and tested procedures and arrangements to enable our company to respond to, continue through and recover from any unforeseen circumstance and its ability to provide the average degree of service to our customers and stakeholders which provide the basis of the organization's technology resilience. (Executive 12, 2022).

Our company has business continuity management processes to ensure the business can recover from a crisis. It is an effective process that clearly defines the roles and responsibilities of employees responsible for its oversight and implementation and the minor requirements for compliance, including levels of Technology resilience to unforeseen circumstances and disaster recovery capabilities. (Executive 14, 2022).

We developed digital capabilities to systematically future proofing our company with faster, cheaper, and more flexible options for working, making them more alert and better prepared in their ability to respond and thrive through adversity. (Executive 15, 2022).

The findings from the excerpt from the illustration that participants echoed present new evidence on the importance of technology readiness on solid resilience during the COVID-19 pandemic. Organisations rarely adopting digital technology were significantly less likely to

adjust and were harder hit by the shock. Findings suggest that a significant additional benefit from upgrading technology might be an increase in the resilience of businesses to shocks.

Develop a digital interface as an additional channel to customers for assisting in obtaining deeper customer understanding to drive more profound supply chain insights Value stream map work process to eliminate waste and non-productive tasks. Fully leverage technology to drive efficiency, quality, and speed.

Hybrid interactions with external stakeholders Balance technology and face-to-face communications. New forms of distractions can emerge. In terms of the technology and how it relates to resiliency in the time of crisis, the literature supports the notion that there is a link between digital technology readiness and managing future crisis and disruptions (Xavier et al., 2022). The next section explores the leading Digital Technologies Transforming the Oil and Gas Industry identified during my research.

6.3 Digital Technologies Transforming the Oil and Gas Industry

The Covid-19 pandemic has intensified the pre-existing imbalance between demand and supply in the oil and gas industry. The disruption resulted in financial instability, forcing companies to cut costs, including reductions in workforce and salaries.

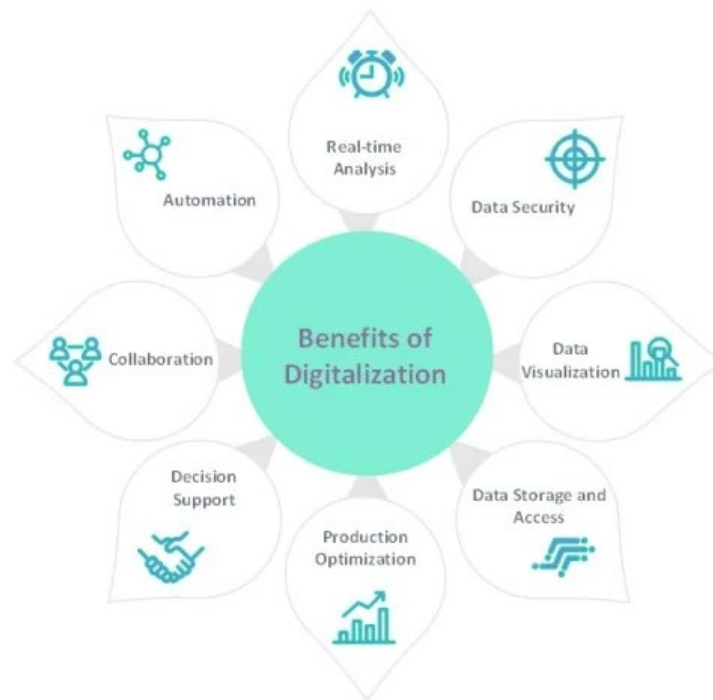
Another threat is the competition from the renewable energy industry, which is projected to be valued at \$1.1 trillion by 2027 (Jaganmohan, 2021). The oil and gas industry needs to leverage digital transformation to overcome these disruptions and remain competitive.

The adoption of digital technologies in oil and gas was initially sporadic, focusing on select critical equipment and workflows. Concerns over data security, shortage of skilled Staff, and cost-benefit uncertainty for adapting ageing assets were obstacles to adopting digital technologies.

An increasing number of oil and gas organisations are improving their assets with digital technologies for long-term profit. Increased use of Cloud computing, AI, IoT and robotics will likely transform the oil and gas industry and create a synchronised ecosystem to meet future energy demands.

These technologies can deliver actionable insights for an oil and gas asset and help companies reduce their capital and operating expenditures. Minimising equipment downtime while enhancing operational performance will remain the critical objective of digitalisation. There is also a growing emphasis among oil and gas producers on digitalising workflows to

enhance operational visibility for improved decision-making. Concepts, such as digital twins and predictive maintenance, are increasingly being modified to suit the different use cases of the oil and gas value chain. Figure 6-1 shows Key Benefits of Digitalisation for The Oil and Gas Industry.



Source: GlobalData Thematic Research

©GlobalData

Figure 6-1: Key Benefits of Digitalisation for The Oil and Gas Industry

This section will explore the leading digital technologies and how they are transforming the oil and gas industry.

1. AI and data science in the oil and gas industry

- **Advanced analytics:** AI (Artificial Intelligence) and big data enable powerful analytics platforms to provide a view for increasing managerial and operational efficiency to decrease crisis across the oil and gas supply network. Can provide There will be significant infrastructure cost savings when advanced analytics is combined with cloud software
- **Seismic data:** Advanced analytics that can analyse seismic data will increase the success rate, provide risk insights, and save time and money during location searches for oil drilling. When seismic data analytics is combined with historical data to identify reservoir oil levels.

- **Predictive maintenance:** Big data gathered from expensive machines working on offshore drilling platforms can be used to predict asset maintenance and reduce failures.

2. Industrial IoT in the oil and gas industry

- **Monitoring pipelines:** Leaks and oil and gas extraction damages can cause significant financial and environmental damage. IoT (Internet of Things) can allow efficient system monitoring of pipes, pumps, and filters with real-time data to avoid leakages. This decrease unnecessary traditional manual checks of the system, and employees are only deployed when irregularities are discovered.
- **Asset Monitoring:** IoT-enabled sensors provide remote access to maintenance and usage data of heavy offshore drilling machines in remote areas with challenging environments.
- **IoT in oil refineries:** IoT-enabled sensors provide real-time data to control performance parameters and achieve precise evaluations.
- **Oil and Gas Logistics:** LPWANs (Low-power wide-area networks) provide monitoring capability to the employees on a vessel with real-time data for maintenance.

3. Automation in the oil and gas industry

As shown in figure 6-2, the global market size of automation technology in the oil and gas industry is projected to almost double by 2030 and reach around \$42 billion. The indication of automation in the oil and gas industry are:

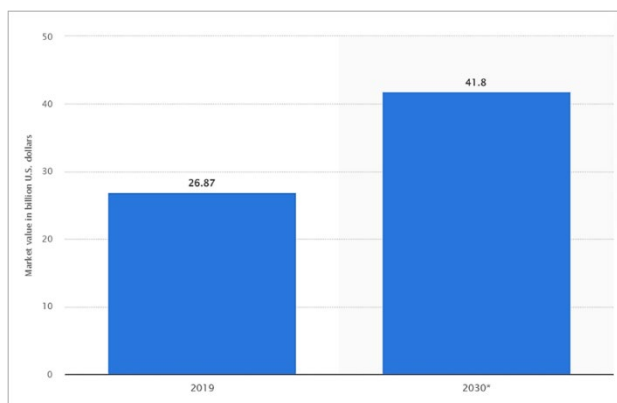


Figure 6-2. The global market value of the Oil and Gas automation by 2030 (Source: Statista)

- **RPA & Intelligent automation:** RPA (Robotics Process Automation) reduces human error risk, significantly decreases closing time and increases audibility in the oil and gas sector.
- **Automating O&G supply chains:** Procurement transactions can be automated to increase cycle times and accomplish overall capacity in oil and gas supply chains through RPA.
- **Drones in offshore drilling:** Inaccessible areas in offshore drilling can be accessed by drones and submersible bots. Bots also reduce errors and increase employee safety while installing new parts and repairing existing ones in risky locations.

4. AR and VR in the oil and gas industry

The AR (Augmented Reality) and VR (Virtual reality) market size is projected to increase ten times to ~\$300 billion by 2024. The implications of AR and VR in the energy industry are.

- **Improved training:** VR headsets can give workers practical training without needing offshore visits. It provides a safer and more efficient way of applying theoretical insight in a practical situation.
- **Improved maintenance:** AR headsets provide hands-free instruction steps and relevant tools and parts. It significantly improves providing graphical information, maintains efficiency, and removes the need for reading lengthy manuals. Furthermore, these AR headsets can provide live video access to Engineers who are unavailable at the maintenance location and record the future process.

5. Blockchain in the oil and gas industry

The connection of blockchain technology in the energy industry are:

- **Secure O&G transactions:** Digital transactions can be done with higher transparency and security through blockchain technology.
- **Increased trust:** Blockchain technology also enables the authentication and storage of certificates of recruitment training. It also enables increased transparency between business partners regarding ethical practices and sustainability.

6.4 Conclusion

From the above five findings, I could deduce several important and recognisable factors in becoming a resilient leader and professional. This factor will add value to my PCLP and leadership development going forward and can be either external or internal factors. The external factors include a support system, with relationships that are based on trust, at work and within the inner family circle, role models that foster self-confidence, at work and in life; availability of sponsors (champions) who are passionate promoters and experienced in identifying and promoting the intrinsic value in the individuals they sponsor; availability of assertive, fair, and transparent feedback on shortcomings; or incentives based on merit, or failures related to recognition processes such as promotions, awards to enable open communication that helps in the identification of enhancement paths. At the same time, the internal factors are a positive attitude in life and work; self-knowledge of weaknesses and strengths; emotional intelligence; assertiveness and self-control, and many others. This then summarises some principles of resilience which are as follows: Leaders can stand up to the pressure of the crowd by standing firm on a foundation that never shifts; Sharing the load does not mean drifting into laissez-faire leadership or strict top-down hierarchies where the praise flows upward, and the mess flows downhill. Sharing the load means identifying, developing, and empowering others to help navigate the complexities of organizational life; Even in harsh environments, leaders can stay true to sound ethical principles and a moral compass that will help them lead forward despite setbacks along the way; Since values serve as a true north for the life of an organization and its leaders, then it makes sense for a leader to seek guidance from the source of those values when things do not go according to plan; When the weight of organizational adversity brings you to your knees, choose to “Get up!”; If, at first, you do not succeed, audit your strategy, adjust tactics, make corrections, and lead on; Resilient leaders are honest, not only in their recognition of tough times but in how they navigate those tough times; The resilient leader stands up under pressure because future leaders are observing and, in many ways, modelling their behaviour off the resilient leaders; Resilient leaders understand when it is time to step aside and allow new leadership to take over; and To stand up under the weight of leadership or to bounce back from a failure in leadership, one must have or seek healthy relationships based on trust, accountability, and healthy values.

While the COVID-19 pandemic has caused severe social, economic, and financial disruption across the globe, the oil and gas industry has been the hardest hit. The oil and gas industry

suffered twin blows in the form of a severe demand disruption and a significant oversupply in the market.

Amidst the global downturn of events, industries across the entire business spectrum turned to digital technologies to survive the blow, rewrite their operating landscape, and build an agile infrastructure. The potential benefits of going digital for the oil and gas industry were plenty — cost savings, safer operations, increased productivity, and improved resiliency to weather unpredictability and remain competitive amidst rising demand for alternative, environmentally-friendly energy sources.

From upstream activities like seismic imaging, advanced geoscience data analysis, complex subsurface formations imaging, asset performance management, and development drilling to downstream fleet and supply chain management, technologies like artificial intelligence, cloud computing, IoT, and advanced analytics have redefined the entire oil and gas value chain.

CHAPTER 7: CONCLUSIONS

7.1 Implications to Leadership theory and Practice

This study uncovered five interesting findings and opportunities for future research. Chapters 1 and 4 identified several gaps in the literature related to resilience and leadership development. The literature review posited that further research is needed to determine at what point in a person's development timeline resilience development should be added and to what level digital transformation can be an enabler of organizational resiliency. Gaining additional clarity to this timeline will add to the body of research on resilience and leadership development. In terms of measuring, one's resilience, organizations and practitioners have been challenged to provide a quantifiable measurement that enables an empirical investigation of the resilience domain, especially within and across teams in organizations (Sharma & Sharma, 2013).

The second area is associated with personal character development and individual resiliency. The concept posited is: Does an individual's own early childhood environment, life challenges, or life experiences strengthen the development of resilience? The research in my study suggested that an individual's life experiences influence and strengthen one's resilience. Also, one study by Bonanno et al. (2007) suggested that a gender variable exists in overall resiliency. In their study, the females were associated with a reduced likelihood of resilience concerning the impact and reaction to a crisis (Bonanno et al., 2007, p. 678). Additional research needs to be conducted to see the true scope of the factors behind gender diversity and one's resiliency and reaction to a crisis. The study I carried out did not examine detailed findings related to gender diversity and its association with adaptability; participants represented both genders and shared experiences of similar life events and personal and professional challenges. The third gap concerns development activities and resiliency programs, including their sustainability. A primary gap in each of the previous studies was the long-term impact of the development exertion. Do these activities have an enduring effect over time?

My PCLP was silent on the issues raised in the research questions before the study, especially in digital technology. I can now update my PCLP to reflect the learnings from this research. Other oil and gas industry leaders might learn from this study's findings. They might review the findings of this study, and in doing so, they might consider assessing which of their leadership characteristics to enhance, which to subdue and which to consider possibly either

suppressing or introducing into their new context, depending on the cultural sensitivities of the contexts in which they will be operating.

7.2 Limitation of the Study, Next Steps, and Implications for Future Research

The research is limited, and most authors point this out as an opportunity for further research. In addition to sustainability is a need for exploration related to the recovery phase once the extremity has ended (Darkow, 2018). This study's findings suggest that resiliency development activities are sustained over time when examined through organizational culture, shareholder commitment, and leadership communication. The opportunity for further research exists related to the long-term impact of the COVID-19 Pandemic on the organization's leaders. Regarding the HardiTraining, it is essential to note that the study only measured hardiness in the short term.

Future research should include a more extended measure of how the participants endure during organizational disruptions (Britt et al., 2016). Although this study was not longitudinal, it did examine leader resilience over 11 years, managing through two crises and one internal disruption. The limitation was that only many participants in the study were in the association and endured all three dislocations.

This has been a small study - highly relevant to my PCLP, and it should be taken only as a guideline to others until tested on broader populations and other industries.

The study was limited to the oil and gas industry contexts to which the findings are, so they should not be generalized to other contexts or resilience leadership more generally until research has been conducted on larger populations.

The use and advent of artificial intelligence (AI) have been excluded from this research. When this occurs, there is a potential to conduct another line of research and inquiry into the effects on leadership in this environment, understanding that AI will significantly impact the oil and gas industry.

7.3 Conclusion

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APPENDICES

Appendix 1 - Research Respondent Consent Form

The information, and anything else you may provide, is required in connection with research that is being undertaken as a component of a professional doctorate. It is your right to withdraw your participation in the research at any stage. Any information or personal details gathered during the research are confidential and neither your name nor any identifying information will be used or published without your permission. However, such information may be provided in confidence to appointed examiners.

The information, and anything else you may provide, will be held in a safe, secure location whilst being utilised and after use would be destroyed or disposed of in a manner that would not jeopardise its confidentiality.

You will be informed whether interviews are being recorded and your signature below implies your consent to this recording.

Please select ONE of the options below by signing your initials in the space provided:

	I give permission for information provided by me during the research to be published
	I give permission for information provided by me during the research to be published provided no identifying information is included
	I do not give permission for information provided by me during the research to be published

If you have any concerns or complaints about the research, please contact:

DBL Admin, AGSL within Torrens University Australia Phone: +61 2 82110634

Email: admin@agsl.edu.au

I agree to participate, given the above conditions.

Signed: _____

Name: _____

Date: _____

Appendix 2 – Interview Protocol

Background

For this interview protocol, I have targeted executive levels of leaders in Oil and Gas Industry. Each of these individuals are based in the different part of world and were all in positions of management during at least one of the two disruptive events being examined, to explore their understanding of.....

Interview Protocol Introduction

Hello/Good afternoon/Good morning (name of interviewee), How are you? I want to thank you for taking the time to speak with me today and agreeing to be interviewed for my doctoral dissertation researches. Before we begin, I would like your permission to record this interview. Do I have your verbal approval to record?

As you know, I am Dare Jeremiah and I am a doctoral student at the Torrens University, Australian Graduate School of Leadership. The interview today will take approximately 45–60 minutes, and your participation is voluntary. What you tell me is confidential and only used for the purposes of my dissertation research. Your name and identifying information will not be included nor shared in reporting data. I will not discuss or report what you say with anyone else outside of this call, and I will keep your identity anonymous. I will be identifying interviewees as “Executive 1, Executive 2,” etc.

Hence, if I speak of you, I will identify you as either Executive 1, 2, or 3. As for the audio interview recording, it will be stored for 180 days for reference through my research project and will be deleted after the publication of my dissertation. Additionally, I will be taking notes throughout the interview.

To give you some context, I am conducting my dissertation research on “How can we build leadership resilience response to crisis in the Oil and Gas Industry?” A question of survival. Let me first explain how I am defining Resilient leadership for this study.

Resilient leadership accordingly implies vigorous combinations of contrary elements such as preparedness and improvisation, clear direction-setting, and flexibility in the face of specific circumstances, making short-term improvised decisions while considering long-term implications; providing flexibility for adapting to changing circumstances while maintaining control; conducting deliberate search while being open to serendipitous emergence”.

I would like to learn more from your perspective on how you demonstrated behaviours and/or characteristics of resilience during oil and gas price crisis as well as our current crisis with COVID-19. Do you have any questions before we proceed?

Research Questions for Reference

1. In what ways is resiliency demonstrated by leaders in Oil and Gas Industry at the executive level?
 - a. In day-to-day functions?
 - b. During Oil and Gas Price Crisis and Covid-19 pandemic crisis events??
 - c. How has this changed over time?
2. What are the specific behaviours and characteristics of resilient leaders at Oil and Gas Industry at the executive level of leadership?
 - a. In day-to-day functions?
 - b. During Oil and Gas Price Crisis and Covid-19 pandemic crisis events??
 - c. How has this changed over time?
3. How can the use of emerging technology enable resilience in oil/gas leaders to optimize the industry?
4. What influences/shapes different forms of resilience in Oil and Gas Industry leadership?
5. What techniques and learning practices can proactively cultivate resilience in the future of Oil and Gas Industry's leaders at the executive level of leadership before an organizational crisis or disruptive event occurs?
6. How can leaders move faster towards digital transformation, in terms of digital investments and potentially rethink the technical architecture, the ability to draw on an extended network of digital solution that may provide a more resilient infrastructure.

Interview Questions

1. When you think of resilience, what do you think of?
2. In your professional or personal life, have you ever been faced with a significant challenge?
 - a. During this time, did you notice if resilience manifested for you?
 - b. Were you resilient before or did this event develop resilience in you?
3. What was the most significant challenge you were facing in the Oil and Gas Industry in Pre-Covid era?

4. How has the Coronavirus pandemic affected this? Probe deep.
 - a. What have you had to change as a leader as a result of the Coronavirus?
 - b. What specific actions are you taking to address these new challenges?
5. As a leader, what do you need to do to adjust your team's current work structure?
 - a. How are you communicating these changes to your team?
 - b. Is there anything you need right now that you do not currently have?
 - c. How do you maintain consistency in leadership when you are having a difficult day with the COVID-19 Pandemic?
6. Thinking back to the oil and gas Price Crisis (2015-2017): What was your position in the Oil and Gas Industry during this time?
 - a. Did the way in which you managed during this disruption change compared to how you managed in day-to-day functions prior to the oil and gas Price Crisis?
 - b. How has this changed for you over time?
7. What do you believe influences/shapes different forms of resilience in leaders in the Oil and Gas Industry?
8. From your perspective, what techniques can proactively cultivate resilience in our next generation of leaders in the Oil and Gas Industry?
9. How can leaders move faster towards digital transformation?
10. What are your biggest concerns/ learning about coming back from the crisis? How can you prepare for them?

Considerations

- Get my participants to talk more about the how and why they chose the stories they choose to tell, as in what they mean.
- Identify distinctions or similarities between personal behaviour vs. professional behaviour by seeking specific examples of both.
- The questions in my protocol are meant to signal what to talk about, mindset for asking these things is what is needed for follow-up questions. Tell me why, tell me what that means to you, etc.

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LEADERSHIP PORTFOLIO

This supporting Portfolio was created from historical published and unpublished leadership-related materials that advanced my leadership development over the last decade. The creation of this Portfolio occurred in parallel with the development of this Critique and underpins *My Leadership Journey* in Chapter 1. It is fundamental to establish that the items in this Portfolio are only a partial representation of all the

experiences that have contributed to my leadership development and represent those most tangible.

The following table provides a catalogued view of these events and artefacts, with a summary of each as a foundation for the Portfolio.

Portfolio Reference Number	Portfolio Item	Implications on Personal Contingent Leadership Paradigm
2005-1	Facilities Integrity Assessment Project, Nigeria	• Identify technical issues and analysis methods, tools, and research processes to identify the root cause of failure. • Using process-driven tools such as in-house design tools and Continuous Product Improvement to quantify the issues and priorities for resolution as a manager. • Creating reports on technical failures with mechanical and hydraulic systems. Utilising these reports for improvement with centralised engineering resources.
2005-2	SNEPCO Bonga Northwest FEED Project. Nigeria	• Lead Flowline/Corrosion Engineer. • Coordinate Flowlines/Corrosion Team on the Project • Responsible for all Materials/Corrosion Reports.

		Developing input to project execution strategy and plan, Integrating operations philosophy into projects.
2005-3	Risk Assessment Training, Nigeria	- The application of formal risk management processes in decision-making as the lead Engineer in a Project. - Effective and consistent information communication by leadership in Oil and Gas operations. - Conducting health and safety investigations when an incident has occurred and critical requirements for incident reporting
2005-3	Performance review providing formal feedback on alignment to company values and achievement of strategic objectives	- Review against NETCO performance review process for Discipline leaders and development opportunities undertaken for the year. - Review of 2005 objectives with measures and achievements. - Structuring of 2006 objectives and measures. - Performance reviews for my direct reports, feedback and structuring of their goals.
2006-1	5-Day Workshop Project Execution Strategy	- My first formal supervisory course with a large company aligning with their strategy, vision, and code of conduct. - Introduction to NETCO leadership expectations with responsibilities and accountabilities. - Consistent leadership and the value created in a team environment, as

		expanded on and proven using simulation in decision-making.
2006-2	Performance Review introduction to Delta Afrik Engineering Ltd	• Review of my achievements to strategic goals with financial profit and loss for Delta Afrik Engineering Ltd. • Achievement of strategic customer objectives assessed based on outcomes. • End-of-year performance report completed and reviewed with the executive panel of Delta Afrik Engineering Ltd. • Performance reviews conducted for my direct reports, feedback and structuring of their goals for 2007.
2007-1	Lead Subsea Pipeline, SUBSEA 7, Nigeria	• Scheduling, planning, and guiding the Subsea and Pipeline team to maintain technical integrity and quality standards and training trainee Pipeline Engineers and Junior Engineers. • Establishes systems and practices to encourage workflow improvements to enhance productivity. • A leadership role in that I guided staff to ensure an engineering team completes projects on time and within budget.
2007-2	Performance Review introduction to SUBSEA 7	• Review of my achievements to strategic goals with financial profit and loss for SUBSEA 7.

		• Achievement of strategic customer objectives assessed based on outcomes. • End-of-year performance report completed and reviewed with the executive panel of SUBSEA 7. • Performance reviews conducted for my direct reports, feedback and structuring of their goals for 2008.
2008-1	Occupational Health and Safety Code: Training for Leaders course	• Introduction to the Australian safety regulations for the oil and gas industry. • Methodology used in the code and governing standards around safety within Western Australia. • Accountabilities in the annual reporting process to the regulator and requirements as the business unit head within Australia. • Expectations for incident and accident reporting. • Significant differences in Nigeria with standards created a moral dilemma for me around expectations in some cases.
2008-2	Performance Review introduction to INTECSEA, Perth	• Review of my achievements to strategic goals and financial acquisition metrics based on WorleyParsons acquiring Intec Engineering. • Review of my achievements to strategic goals and financial profit and

		loss for Perth service operations business. • Performance reviews of my direct reports, feedback and structuring of their goals.
2008-3	Consolidation on INTEC Engineering and WorleyParsons facilities and service organisations	• Rationalisation of facilities based on leases, size, and consolidated business requirements. • Sought service business requirements from customers and rationalised their contracts and charge rates. • Established a functional organisation structure to deliver customer requirements. • Constructed and executed a communication plan to stakeholders and affected team members.
2008-4	TTI Success Insights: Behaviours and Motivators Review by peers and direct team members (subordinates)	• First anonymous review by peers and team members to profile my behaviours. • The importance of formal feedback loops and incorporating feedback to reinforce behaviour or change. • Created an action plan to incorporate tools and strategies to evolve the gaps identified from the report. Sought informal feedback on gaps thereafter.
2008-5	1-day Presentation Skills Course - Chiefly Business School	• Improve your skill in handling presentation fears • Utilise techniques in the understanding audience and in forming the key message I want the audience to retain and/or act upon

		• Appropriately choose presentation content, structure a presentation • Use various methods to open a presentation, connect with an audience and close powerfully. • To look and sound confident and be perceived as articulate
2008-6	1-day Technical Document Report Writing Course - Chiefly Business School	• Plan my reports using the essential planning tools covered • Organise my thinking into a clear, logical structure before beginning to write • Write a clear, focused executive summary before starting on the report body • Write the report body in line with your stated objectives • Review for logical style and flow, plain English usage, and correct style
2009-1	Performance review under INTECSEA. Process and Policy	• Review of my achievements in strategic goals and financial profit and loss for Perth service operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2010.

2009-2	Risk, Reliability and Availability Training	• Risk - putting a monetary value on risk, risk analysis, assessments and risk management, fatal accident rates, significant hazards, developments in legislation, and safety cases. • Reliability, Availability and Maintainability (Failure Rates, probabilistic design, Availability and redundancy, maintainability and deliverability, safety integrity level and reliability strategies. • Reliability Analysis Tools
2010-1	Performance review under INTECSEA. Process and Policy	• Review of my achievements in strategic goals and financial profit and loss for Perth service operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2011.
2010-2	Employee Opinion Survey (EOS): INTECSEA enterprise initiative with leader, peer and team member feedback.	• Formal feedback loop linked to enterprise strategy and career development plans. • Importance of stakeholder engagement, communication and influencing highlighted in the Enterprise, based on feedback.

		• Managing expectations between business units and customers. • Worked on specific action plan and training in areas identified for improvement.
2011-1	Performance review under INTECSEA. Process and Policy	• Review of my achievements in strategic goals and financial profit and loss for Perth service operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2012.
2012-1	Principal Subsea Pipeline Engineer, GENESIS OIL AND GAS CONSULTANTS	• Dealing and communicating with internal and external stakeholders for the delivery of projects • Ensure the safe execution of all projects managed • Coordinate and direct drafters in creating drawings, Check drawings and other documents. • Integrate personnel to ensure results that meet the needs of the plant customers • Review requirements on projects assigned

2012-2	Performance Review introduction to GENESIS OIL AND GAS CONSULTANTS	• Review of my achievements to strategic goals and financial acquisition metrics based on GENESIS acquiring Intec Engineering. • Review of my achievements to strategic goals and financial profit and loss for Perth service operations business. • Performance reviews of my direct reports, feedback and structuring of their goals.
2013-1	Operations Leadership Role – FEDDO PTY LTD	• Set leadership on all operational, technical, and developmental activities, championing a culture of continuous improvement. • Organise, Plan, and oversee the team's workflow and resource allocation. •Manage, Lead and Develop staff. • Liaising with clients and internal departments as required, maintaining good relationships. • Ensuring project deadlines are met by requirements and managing service contracts where applicable. • Performances manage the contract following agreed key performance indicators. • Ensuring best practises, techniques and innovation are developed and implemented across similar contracts are being applied to the business unit.

2013-2	Developing and Mentoring Role – FEDDO PTY LTD, PERTH	Developing and training graduate and young Engineers, also converting other senior discipline Engineers into full Subsea through an organized training Subsea System integration course (Perth, Sydney, Kuala Lumpur, Abu Dhabi etc.)
2013-4	Performance Review introduction to FEDDO PTY LTD, PERTH	- Review of my achievements to strategic goals and financial acquisition metrics based on FEDDO acquiring Intec Engineering. - Review of my achievements to strategic goals and financial profit and loss for Perth service operations business. - Performance reviews of my direct reports, feedback and structuring of their goals.
2014-1	Company Site Representative – NPCC, ABU DHABI, UAE	- Technical Authority on all Subsea and Deepwater Projects/ Enquiries. - Provide Technical Advice to NPCC Senior management - Client Representative at INTCSEA office- Kuala Lumpur, responsible for all the FEED Verification and recommendation reports - Prepare Technical Clarifications - Approve INTECSEA (Sub Contactor) technical milestone - Prepare Project risk register and facilitate HAZOP/HAZID

		• Responsible for collating all required input based on the Client's provided scope of work. • Ensure that activities estimated, including the corresponding estimated man-hour for each activity is fit for purpose and within the scope of work.
2014-2	Performance Review introduction to NPCC, ABU DHABI, UAE	• Review of my achievements to strategic goals and financial acquisition metrics based on FEDDO acquiring Intec Engineering. • Review of my achievements to strategic goals and financial profit and loss for Perth service operations business. • Performance reviews of my direct reports, feedback and structuring of their goals.
2015-1	Project Engineering Management, NPCC, ABU DHABI, UAE	• Responsible for all Engineering Deliverables and Engineering Inputs to Contracts and Proposals. • Focal Point for all Engineering Disciplines, including the HDD Pipeline construction • Responsible for collating all required input based on the Client provided the scope of work. • Ensure that activities estimated, including the corresponding estimated man-hour for each activity is fit for purpose and within the scope of work. • Conduct regular reviews of schedule and cost performance.

		• Conduct regular reviews of identified risks (and opportunities) relating to the project objectives and facilities and develop/implement strategies to mitigate risks as required • Develop the bid package for the Sub-Contractor and select the preferred Sub Contractor on basis of the best technical and commercial offers. • Mobilize the Sub Contractor and then Manage and control the work undertaken by Sub Contractor in an effective manner • Align Sub Contractor on project drivers, priorities of work and project milestone dates • Ensure project deliverables and activities associated with the design are achieved following project milestone dates, and technical requirements of the Company BOD, Standards and Specifications • Organise Design Reviews (HAZIDS, HAZOPS, ENVIDS etc.) which were carried out promptly following Company procedures • Provide guidance to Discipline leads on aspects of design, manufacture, construction, installation, and offshore hook up and commissioning of the facilities to meet project requirements
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		• Review/resolve project variations to the contract as required.
2015-2	Performance review under NPCC, UAE. Process and Policy	• Review of my strategic goals and financial profit and loss achievements for the operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2016.
2016-1	International Business (Short Course) - University of New Mexico, USA	• Focuses on managing organizations in the international economy. • Building on Introduction to the Global Business Environment • Focuses on organizational level and management issues in international settings. • The course prepared me with practical and research-based knowledge and skills necessary to successfully operate an organisation across borders. • This course utilizes an inquiry-based approach to understanding managing in the Global Business Environment. • This exposed my leadership to a better understanding of managing and leading organizations in the global

		environment in which my business operates.
2016-2	Oil and Gas Industry Operation and Markets (Short Course), Duke University, USA	• The oil and gas industry has an enormous impact on daily life. Individuals, corporations, and national governments make financial and policy decisions based on this natural resource's cost, use, and availability. • Provides an overview of the production of oil and gas, from initial exploration to final transport • Focuses on the forces that drive the industry's operations, the oil and gas markets, including the cost of wells, seasonal impacts on prices, and the role of oil reserves.
2016-3	Leadership in 21st Century Organizations (Short Course), Copenhagen Business School, Denmark	• Enacted my own personal leadership approach, derived from my ongoing evaluation of how Jim Barton has handled his leadership situation, as well as from established leadership concepts and frameworks. • Avoid leadership actions that might have worked in the past but are not suited to a new, challenging 21st-century world. • Navigate new 21st-century leadership challenges, such as greater reliance on specialized workers or the need to respond to external scrutiny in an increasingly transparent world (and many more).

		• Avoid "slippery slope" ethical failures and think more clearly about the separation between public and private life for a 21st-century leader.
2016-4	International Leadership and Organizational Behaviour (Short Course), Università Bocconi, Italy	• Leadership Acumen. International perspective on leadership, common traps & challenges, and opportunities of intercultural leadership. • Navigating Culture. Impact of cultural differences on organizations, decoding culture, culture classifications and stereotyping, developing intercultural intelligence. • Communication. Communication and its impact on leadership identity and relationships, managing communication to improve decision making, steps for developing your intercultural communication skills. • Motivation. Views on individual motivation, cultural differences in motivation, developing motivation and commitment in teams. • Networking. Patterns of interpersonal relationships in/across organizations, strategically developing social networks and social capital, norms for networking across cultures. • Conflict. Effective / defective conflict management approaches, dealing with ethical dilemmas.

2016-5	MBA: Data and Business Decision Making (BEA674)	• Illustrating how key statistical concepts apply to business environments. • Appraising and applying various statistical techniques to analyse various business problems critically. • Organising and communicating statistical findings to provide relevant recommendations for business decision-making.
2016-6	MBA: Foundations of Marketing (BMA506)	• Analysing key concepts, tools and frameworks used in marketing practice • Critically questioning, assessing, and responding to current assumptions and trends within marketing • Reflecting on marketing knowledge and applying it in the analysis of a marketing concern • Conversing in marketing language and implementing the conventions of academic writing.
2016-7	MBA: Organisational Behaviour (BMA547)	• Critically analysing the role of individual, group, and organisational-level influences on behaviour in organisations. • Applying organisational behaviour theories, concepts, and models to contemporary workplace issues. • Evaluating the relevance of organisational behaviour theory and practice in different workplace contexts.

		• Transmitting knowledge of organisational behaviour through written and/or oral communication.
2016-8	MBA: Management Ethics (BMA735)	• Describing and applying a variety of worldviews and theories of ethics. • Critically reflecting upon, giving voice to, and enacting your moral values in the context within which you are likely to perform the role of a manager. • Communicating an informed view of social responsibility. • Writing academically using appropriate academic sources and language
2016-9	MBA: Managing People and the Employment Relationship (BMA583)	• Identifying and critically analysing the nexus between leadership and human resources management practices in managing people effectively in different organisational contexts • Evaluating current workplace challenges faced by complex, contemporary organisations, and their implications for the future of work • Constructing and communicating convincing arguments relating to the effective application of theory to practice regarding contemporary people management.
2016-10	Performance Review introduction to FEDDO GROUP	• Review of my achievements to strategic goals and financial

		acquisition metrics based on FEDDO acquiring Intec Engineering. • Review of my achievements to strategic goals and financial profit and loss for Perth service operations business. • Performance reviews for my direct reports, feedback and structuring of their goals for 2017.
2016-11	End of the year Global Executive session with Board of Directors	• Project and milestone reviews. • Technical, Social, Regulatory and Process issues reviewed, and action strategizing conducted. • Resource allocation and budget aligned to prioritised actions. • Highly confidential in nature with the Minutes bound by non-disclosure agreements due to sensitivity.
2017-1	MBA: Economics for Leaders (BEA684)	• Critically analysing key economic concepts from the perspective of organisational leaders and managers. • Appraising the applicability of traditional economic concepts to contemporary business environments and UN Sustainable Development Goals. • Evaluating emerging economic concepts and theory in relation to current global economic challenges
2017-2	Leadership and Change Management (BMA701)	• Critically analysing leadership and change management theory and principles.

		• Evaluating and applying an integrated leadership and change management approach. • Appraising how principal elements of leadership impact on self, employees, organisations, and society.
2017-3	MBA: Strategic Management (BMA799)	• Critically evaluating the application of foundational and contemporary strategic management theories, principles, and processes. • Analysing organisational strategies in a business. • Communicating complex concepts and justifying decision-making in professional collaborative and written formats. • Mapping digital strategies in a business.
2017-4	Business Development, FEDDO GROUP	• Developing a business development strategy focused on financial gain • Arranging business development meetings with prospective clients • Build long-term relationships with new and existing customers
2017-5	General Management, FEDDO GROUP	• Overseeing global daily business activities, • Improving overall business functions, • Training heads of departments, • Managing budgets, • Developing strategic plans, creating policies, and • Communicating business goals

2017-6	Performance review under FEDDO GROUP. Process and Policy	• Review of my strategic goals and financial profit and loss achievements for the operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2018.
2017-7	End of the year Global Executive session with Board of Directors	• Project and milestone reviews. • Technical, Social, Regulatory and Process issues reviewed, and action strategizing conducted. • Resource allocation and budget aligned to prioritised actions. • Highly confidential in nature with the • Minutes bound by non-disclosure agreements due to sensitivity.
2018-1	Performance review under FEDDO GROUP. Process and Policy	• Review of my strategic goals and financial profit and loss achievements for the operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects.

		• Performance reviews for my direct reports, feedback and structuring of their goals for 2019.
2018-2	End of the year Global Executive session with Board of Directors	• Project and milestone reviews. • Technical, Social, Regulatory and Process issues reviewed, and action strategizing conducted. • Resource allocation and budget aligned to prioritised actions. • Highly confidential in nature with the • Minutes bound by non-disclosure agreements due to sensitivity.
2019-1	Performance review under FEDDO GROUP. Process and Policy	• Review of my strategic goals and financial profit and loss achievements for the operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2020.
2019-2	End of the year Global Executive session with Board of Directors	• Project and milestone reviews. • Technical, Social, Regulatory and Process issues reviewed, and action strategizing conducted. • Resource allocation and budget aligned to prioritised actions. • Highly confidential in nature with the

		• Minutes bound by non-disclosure agreements due to sensitivity.
2020-1	DBL: Business Leadership Theory & Practice (DBL701)	• Significant change in mindset to leadership with the development of a foundational understanding to leadership theory. • Self-reflection enabled the development of a gap review and where my own journey had emerged from, when aligned to the applicable theories. • Development of initial Personal Contingent Leadership Paradigm.
2020-2	DBL: Case Analysis (DBL702)	• Critical review of the impact of my context on my leadership approach in two selected situations about five years apart. • Present two separate PESTEL and SWAT analyses for the two leadership case situations undertaken to provide a basis for comparing how your organisation's context and internal position affected your approach to leading in each selected case situation. • Evolved my understanding of case analysis and the positives and deltas of the approach. • Give insights derived from the impacts of my context analysis what modifications, also will explore how I intended to further improve my PCLP and highlight my priority actions.

2020-3	Performance review under FEDDO GROUP. Process and Policy	• Review of my strategic goals and financial profit and loss achievements for the operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2020.
2020-4	End of the year Global Executive session with Board of Directors	• Project and milestone reviews. • Technical, Social, Regulatory and Process issues reviewed, and action strategizing conducted. • Resource allocation and budget aligned to prioritised actions. • Highly confidential in nature with the • Minutes bound by non-disclosure agreements due to sensitivity.
2021-1	DBL: Critical Reasoning & Ethics for Business Leaders (DBL703)	• The use of applied ethics and critical reasoning to review my Personal Contingent Leadership Paradigm, which led to several modifications of my Paradigm. • The theoretical methodologies applied in arguments, their application, and appropriate uses within my business environment. • Self-reflection of my methods of Critical Reasoning based on historical

		experiences and the opportunity to improve this application incorporated into my adaptive spiral.
2021-2	DBL: Business Leadership Issues (DBL704)	• Development of my understanding of scoping, mapping, and analysing the strategic arena when applied to my working environment. • Use a formal response process when completing a holistic strategic arena map and evaluating priorities, uncertainties, and future scenarios. • From this work, I developed a different perspective on approaching emerging issues and responses that I had not considered previously. • Sharing the developed process with my work peers and manager to get their input and understanding was a highlight of this work!
2021-3	Performance review under FEDDO GROUP. Process and Policy	• Review of my strategic goals and financial profit and loss achievements for the operations business. • Review against divestiture metrics and risk management of contracts in place. • Customer and dealer satisfaction is also sought in this performance review due to the complexity of projects. • Performance reviews for my direct reports, feedback and structuring of their goals for 2020.

2021-2	End of the year Global Executive session with Board of Directors	• Project and milestone reviews. • Technical, Social, Regulatory and Process issues reviewed, and action strategizing conducted. • Resource allocation and budget aligned to prioritised actions. • Highly confidential in nature with the • Minutes bound by non-disclosure agreements due to sensitivity.
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