



UNIVERSITY OF APPLIED SCIENCES INSTITUTE

Working Paper Series

**BUSINESS TRANSFORMATION AND GROWTH ENABLED BY A
GUARDIAN ECOSYSTEM**

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SBS-WP-2025-1
Date May 31st 2025

ISSN (Print): xxxx-xxxx

ISSN: (Online): xxxx-xxxx

SBS WORKING PAPER SERIES

SBS-WP-2025-01

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ECOSYSTEM**

By

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Abstract

This paper addresses the complex problem of business growth through a case study of the National Marine Dredging Company (NMDC) Group, based in Abu Dhabi, UAE. The hypotheses propose that accountable, engaged employees drive performance and that Guardian leaders enable a culture conducive to growth. Employing an eclectic methodology combining case study, design thinking, and mixed methods, the study investigates employee engagement data from 2019 to 2023, with a focus on the post-merger year of 2022. Analyses using Likert frequency scales, Chi-square, and ANOVA reveal consistent employee satisfaction levels despite the merger. Financial data from the same period indicate a revenue increase of 56%, EBITDA increase of 64%, net profit increase of 86%, market cap increase of 130%, and project backlog increase of 69%. This data is further examined within a performance management and culture change framework, aligning employee goals with company objectives for growth. A Guardian Growth and Enterprise (2GE) conceptual model is presented as a prototype for operational excellence, emphasizing the Guardian ethic of people care in synchronizing strategic, performance, and cultural processes. The case study analyzes leadership education within a five-year culture change program aligned with key performance indicators and systems. The findings confirm that leaders are fostering a culture of interdependence essential for growth. The study concludes by presenting the 5P Guardian Ecosystem Model as a holistic solution for sustainable growth, asserting that business growth is an outcome of people growth, mediated by synchronized performance and cultural systems.

Keywords: growth, guardianship, leadership, performance, culture, synchronization, ecosystem

1.0 Introduction: Growth as a CEO Dilemma

Business growth is by no means easy. It is hard to achieve and even harder to sustain. The dilemma for any CEO is how to synchronize three priorities relating to business growth:

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1. How to ensure persistent growth and profit for shareholders over time?
2. How to grow and develop people so that they can achieve excellence through ethics?
3. How to grow as a CEO, and as a person, whilst staying true to one's own principles?

At the heart of this dilemma are the twin questions of how to lead growth ethically, and how to sustain it over time. This inquiry is the prime focus of this paper, where ethical business growth is defined as a *wicked problem* (Rittel & Webber, 1973; Buchanan, 1992; Brown, 2019; Raffety 2013; 2020). A wicked problem is complex and substantive, but if successfully addressed, can unleash massive value. The statistics on growth are sobering. Collins (2001) found that 9 percent of companies outperformed equity market averages for ten years, in his study of 1,435 businesses from 1965 to 1995. Allen and Zook (2001) reported that only 13 percent of their sample of 1,854 companies grew for as long as 10 years. Kaplan and Foster (2001) demonstrated that only 16 percent of 1,008 companies, tracked from 1962 to 1998, were able to survive. What all these studies suggest is that very few companies sustain growth for more than a decade.

1.1 From CEO Dilemma to Research Problem

The research problem is defined as how to deliver on *growth without ethical compromise*, across three indices:

- 1) Business growth that delivers on shareholders' demand for persistent profitability;
- 2) People growth that empowers and enables excellence with ethics;
- 3) Personal growth as a GCEO with fidelity to business and ethical principles.

The problem definition derives from prolonged research into multiple studies of business growth ethical (Pfeffer 1994; Pfeffer & Sutton, 2006; Nadella, 2017; Edmans, 2021; Grant, 2023; McKinsey, 2023) whilst learning on the job as a CEO.

The prime aim of this research is to move from problem to solution, while falling in love with the problem (Levine, 2023). The objective is to study how enabling systems and culture contribute to growth, to inform a testable organisational model that becomes a scalable prototype solution (Martin, 2009). What follows is case study of business growth at the National Marine Dredging Corporation (NMDC). NMDC is the UAE's leading contractor in the field of engineering, procurement, construction (EPC) and marine dredging, with a global footprint spanning the MENA region and South Asia.

Two questions drive the research, namely, whether employee engagement improves performance and whether leadership, that prioritises pro-social care, empowers a pro-growth culture? Employee engagement is recognised as a key aspect of organisational health (Keller & Schaninger, 2022), coupled with an intentional approach to culture. Current research demonstrates that high levels of employee satisfaction correlate with increases in EBTIDA and success in leveraging the benefits of M&A, leading to higher company valuations (McKinsey, 2025).

Through the NMDC culture change programme, key leadership behavioural competencies, are examined that support a culture of interdependence (Blake & McCanse, 1991), deemed essential for operational excellence and growth. Culture can be defined as the tacit and overt beliefs, behaviours, and working practices that enable a company to deliver value (Schein, 2004). An intentional approach to culture is critical for growth. It arises when we ask, "What cultural model is needed ensure sustainable growth and performance"? The answer to that is the 5P model at the heart of this case study, more fully expanded in an upcoming book entitled "Growth: Who Cares"? The book expands on this research to explain how to lead an ecosystem approach to business growth. It addresses the both the people/performance equation and the leadership/culture dynamic that every CEO must manage to ensure ethical growth. The book is augmented by an App that ensures insights can

be applied and planning is underway for a Guardian Leadership Academy that will develop the next generation of pro-growth CEOs whilst continuing to advance research into the 5P model presented here.

1.2 Guardianship as a Cultural Catalyst for Growth

The problem of business growth relates, in part, to the terms in which success is defined. A great leader arguably secures success under the umbrella of principles and values, not in their absence. As GCEO for the National Marine Dredging Company (NMDC), the author developed and applied a Guardian style of leadership. This paper introduces the concept of the Guardian organizational ecosystem, exemplified within the evolving NMDC case study. A key tenet of this model is that leaders are guardians of the organization's interests, whilst also fostering the learning, development and success of all. Guardianship is simply defined as a universal ethic of pro-social care for others (Grant, 2023). It was originally expressed in the Sunnah by Prophet Mohammed (Peace be upon him) 1,445 years ago and remains relevant today:

All of you are guardians and are responsible for your subjects. The ruler is a guardian of his subjects... and so all of you are guardians and are responsible for your subjects. (Al-Bukhari, n.d. Book 67, Hadith 134)

The case study reported tests the efficacy of Guardian leadership in catalyzing culture towards interdependence and business growth. There is a strong body of literature that recognizes the importance of leadership in generating social and cultural capital to drive growth (Greenleaf, 1977; Nadella, 2018; Porcini, 2022; Peters, 2022; Joly, 2022; Grant, 2023). However, what much of this literature lacks is an operationalized model, derived from practice as opposed to theory alone, that explains an organization-wide approach to delivering growth. This involves taking an inside-out approach to organizational leadership and growth (Greenleaf, 1998, 2012; Covey, 2020; Maor, Kaas, Strovink & Srinivasan, 2004)

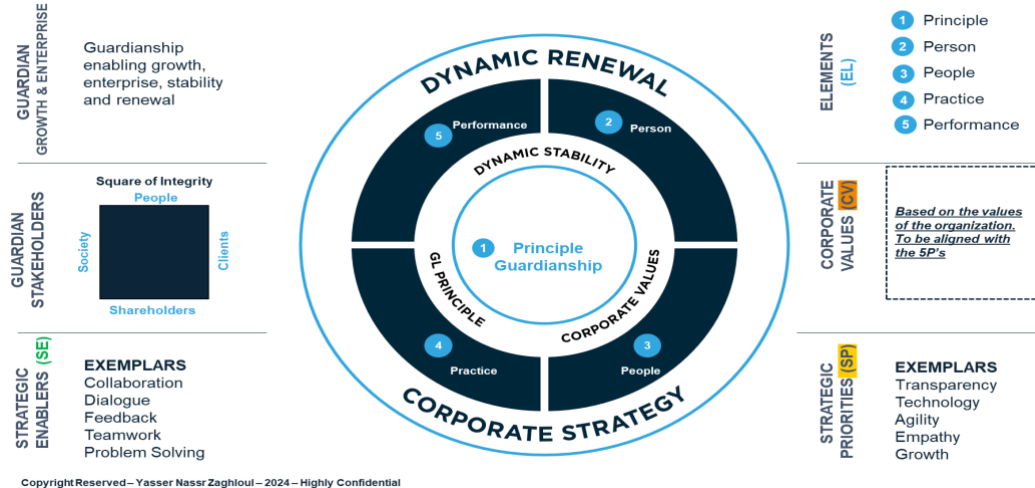
that considers key leadership competencies (Blake & McCanse, 1991). It demands an intentional approach to culture (Schein, 2004; Hamel & Zanini, 2020; Grant, 2013, 20121, 2023; Doerr, 2018; Schmidt & Rosenberg, 2014; Cunningham and Cuba, 2019; Nadella, 2018).

1.3 NMDC Group Cultural Heritage

NDMC was founded just over fifty years ago under Emiri Law No. 10, issued by His Highness Sheikh Khalifa bin Zayed Al Nahyan. Driven by his vision, the NMDC Group has propelled itself from a local marine dredging company to a world-renowned powerhouse today. The late Sheikh Zayed, UAE Founding President, modelled how to combine ethical principles with business and economic growth. This cultural heritage whose currency is character combined with care has become the defining blueprint for the author's own leadership style and research into Guardianship. Integral to the cultivation of guardian culture at NNDC has been the attention paid to a synchronized organisational ecosystem. Synchronization is regarded as both a strategic and cultural enabler that involves a delicate balance between the seemingly opposing forces of dynamic stability and dynamic renewal. Key elements that must be successfully synchronized include strategy and execution, employee engagement, leadership behaviours, cultural processes and performance systems.

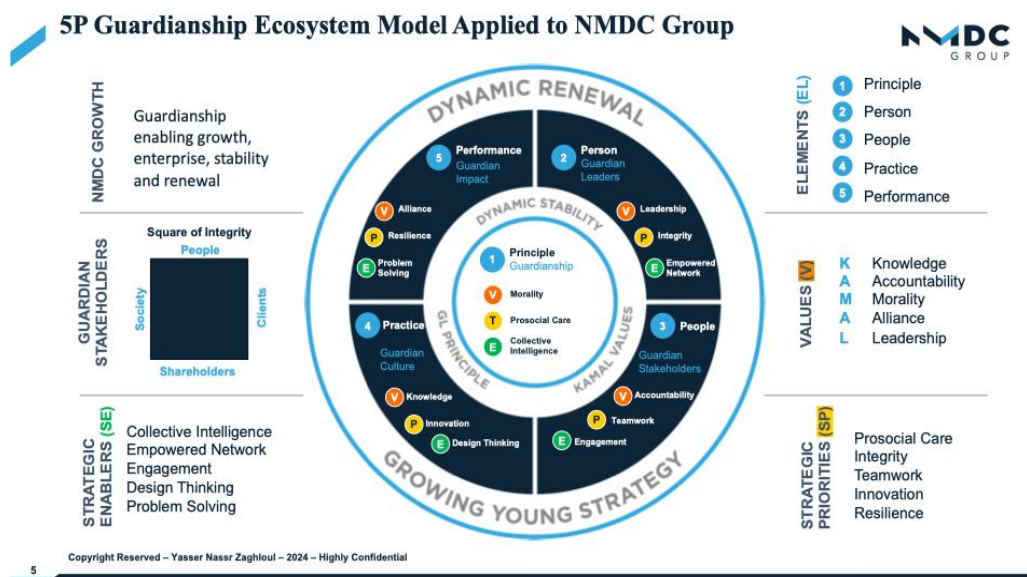
1.4 The 5P Ecosystem Model

Within this research, business growth is viewed as an *outcome*, of the 5P ecosystem model, characterized by *Principle, Person, People, Practice and Performance*. Within the base 5P model presented below, the term interdependent *elements* refer to systemic factors relating to strategy, values, people and culture that drive growth and organizational performance. The 5P model is about the holistic alignment of corporate values, strategic priorities and strategic enablers that prioritize leadership and teamwork in executing with excellence.

Figure 1*5P Base Model - Guardianship Ecosystem Model*

Within the 5P Base Model, strategic priorities and strategic enablers, as exemplars, are mapped. The intention is that the 5P conceptual base model can be adapted for any organization. The result of applying the base model elements to the NMDC Group are presented in Figure 2 as the 5P Guardian Ecosystem Model. It incorporates the values of knowledge, accountability, morality, alliance and leadership (KAMAL). NMDC strategic priorities encompass *Prosocial Care, Integrity, Teamwork, Innovation and Resilience*. Alongside these are the NMDC strategic enablers of *Collective Intelligence, Empowered Networks, Engagement, Design Thinking and Problem-solving*, illustrated below.

Figure 2*5P Guardianship Ecosystem Model Applied to NMDC Group*



The Table below summarizes the 5P Model specific features applied to NMDC Group.

Table 1

5P Elements, Values, Strategic Priorities and Enablers applied to NMDC Group

Element	Value	Strategic Priority	Strategic Enabler
Principle of Guardianship	Morality	Prosocial Care	Collective Intelligence
Person Characteristics of Guardian Leaders	Leadership	Integrity	Empowered Network
People Guardian Stakeholders	Accountability	Teamwork	Engagement
Practice Guardian Culture	Knowledge	Innovation	Design Thinking
Performance Guardian Outcomes	Alliance	Resilience	Problem-solving

The 5P model is, primarily, a stakeholder model (Freeman et al, 2010). The Square of Integrity incorporates *People, Clients, Shareholders and Society*, where capability to solve client problems is regarded as key to business success (Levine, 2023). The 5P model incorporates the paradoxical concepts of dynamic stability and dynamic growth. Stability arises from the enduring Guardianship ethic, supported by company core values. Dynamic growth is enabled by the synchronization of strategy, systems and cultural processes as

flywheels of a self-renewing system. NMDC's *Growing Young* strategy construes managers as business leaders responsible for entrepreneurial resource management and architecting business value.

1.5 Emergent Research Hypotheses and Questions

A first research hypothesis relates to the People and Performance axis of the model, where it is arguable that accountable, engaged employees drive performance. A second emergent hypothesis on the Person and Practice axis, is that Guardian leaders shape a pro-growth culture. The specific hypotheses which the research seeks to test are 1) *Accountable, engaged employees help drive performance* and 2) *Guardian leaders enable a culture of business growth*.

These hypotheses inform the line of inquiry expressed through the three research questions:

RQ1. Does employee engagement help drive company performance and profitability?

RQ2. Is Guardianship a leadership and cultural enabler for growth?

RQ3. Does Guardianship help stimulate a corporate ecosystem for business growth?

2.0 Literature Review

This literature review encompasses an eclectic mix of business books, professional and research journals, and unpublished sources deemed relevant to the research problem.

2.1 The Wicked Problem of Ethical Growth

It is noteworthy that no overarching theory of economic or business growth exists. However, having reviewed growth from a macro-economic level, the key theme that does emerge is the importance of moral values, coupled with relationships of care, in driving sustainable growth (Galor, 2011; 2022; Piketty, 2014; 2020; Stiglitz, 2019; Carney, 2021; Lilius, 2022; Susskind, 2024). At the company level, research published by McKinsey (2023) entitled *The Triple Play* highlights the ethical aspect of business growth. The Boston

Consulting Group (2023) argue that pro-growth businesses must become *both* ethical and learning and organizations (Edmans (2021, p. 6). Pfeffer and Sutton's (2006) research evidence that laser focus on data within an ethical culture produces outsize results.

A key dimension of ethical growth is a company's relationship with its stakeholders. Stakeholder theory (Freeman et al, 2010) proposes that it makes no sense to talk about business without ethics, and it makes no sense to talk about business ethics without talking about people. Freeman et al (2010, p.3-4) argue that stakeholder theory addresses three important problems, namely 1) ethics in capitalism; 2) value creation; and 3) managerial mindset for change and performance. The authors emphasize that stakeholder theory puts questions of moral purpose right at the very center of growth endeavors, and that more research is needed into stakeholder dimensions of growth. This is a gap in the literature that this paper seeks to address.

Given the complexity of ethical growth as a wicked problem (Buchanan, 1992), a synthesis of multidisciplinary theory informed the design of the prototype 5P growth model presented earlier. Martin and Moledoveanu (2007 p.8) urge business leaders to research and develop new models that address wicked problems. This is another gap this research aspires to address. Senge et al. (2005) and highlight the benefits of prototyping models, where prototyping is defined as “modelling or simulating your best current understanding precisely so you can have a shared set of understandings that enable communication” (2005, p.147). Similarly, Martin (2009) and Bezos (2021) all underline the benefits of experimentation and learning in “prototype organizations” (Pfeffer and Sutton, 2006),

The need for academia to better research complex aspects of business practice has been highlighted by Munger (Kaufman, 2024), former vice chairman of Berkshire Hathaway. He critiques the glaring lack of “synthesis in economics” and attributes his considerable success in business to *ignoring* rational efficient-markets theory. He highlights the current

limitations of mainstream organizational theory, arguing that there are huge “virtue effects, irremovable complexity and paradox” in successful corporations currently under-researched by academia. This is a gap in the theory that this research also seeks to address.

2.2 Organizational Models

In reviewing archetypal models of organizations, arguably all organizations have elements of the economic (Williamson, 1995), the social (Granovetter, 1985) and the moral (Nadella, 2018). Irrespective of a preferred model, a recognized criterion of all healthy organizations is their capacity to manage employee wellbeing alongside change (Keller and Schaninger, 2019). Kotter (2014) proposes a dualized model of the organization that combines hierarchy with the agility of lateral adaptive networks as the most adaptive to seize opportunity. Hamel and Zanini (2020) propose a well-researched blueprint for agile organizations designed more around human dynamics than bureaucracy. They define the organizational model of “humanocracy” in terms of community, experimentation and paradox. The organizational theory underpinning their model incorporates dynamic capabilities theory (Pisano, 2019) and network theory (Burt, 2004). They argue that relationships of trust (Covey and Merrill 2006; Covey, 2022; Cunningham and Cuba, 2019) are a pre-requisite for organizational health and business growth. Hence, their argument on the need for organizational design premised on people care and *humanocracy* principles. They observe that whilst bureaucracies excel at addressing routinised problems in low-change environments, it takes a community ethos to problem-solve in high-change contexts. This principle of community and people care is shared by theorists such as Daugherty and Wilson (2022), Pfeffer (1994; 2006), Peters (2021) and Porcini (2022) and CEOs such as Nadella (2018) and Joly (2021). This robust evidence base has informed the evolution of the 5P model, central to this working paper.

The evolution of the 5P model is also indebted to systems theory drawn from the science of complexity (Lorenz, 1972; Capra, 1991; Gleick 1997; Senge, 2010). Complexity theory helps to conceptualize change and unpredictability, which all businesses must successfully navigate to grow. It resonates with theories of adaptive leadership by Hamel and Zanini, (2020) and Pisano (2019), already cited. In seeking to conceptualize growth, strategy, culture and performance across an organisational ecosystem, the complexity concepts of dynamic stability and renewal offer helpful insights. Within the 5P model, the use of the term *ecosystem* deliberately brings with it assumptions about an ecological model (Bronfenbrenner, 1979) of organization derived from complexity theory.

2.3 Leadership for Ethical Growth

A theme that emerges from all the literature reviewed so far is that excellence is driven by leaders who view it as a moral imperative (Peters & Waterman, 1980; Pfeffer & Sutton, 2006; Edmans, 2012, 2021; Peters, 2021) and who strategically prioritise growth and performance excellence (McKinsey, 2023). Performance excellence is essentially a dual concept that combines soft leadership skills with hard measures of profitability, supported by well-aligned cultural and performance management systems (Doerr, 2018; Blake and McCanse, 1991).

Blake and McCanse's (1991) argue that performance is always an outcome of engaged people and healthy relationships. They propose a framework for leadership and organizational efficacy that aligns concern for people with concern for production, coupled with the GRID technology (Blake & Mouton, 1985) that measures gaps in organisational culture. They identify key leadership behavioral competencies, as *conflict management*, *decision-making*, *critique and feedback*. They cite *initiating*, *inquiry*, *advocacy*, *goal setting* and *teamwork* as related leadership competencies. These behavioral competencies are incorporated into the NMDC Employee Performance Management System (EPMS), aligned

with NMDC values. The use of psychometric tests derived from their GRID framework has enabled the development of bespoke performance appraisal systems at NMDC that complement culture change processes, reported in this case study.

The research of Collins (2001) and Collins and Porras (2004) highlights the importance of forensic attention to leadership development, culture and operational excellence. Collins and Hansen's (2011) *Great by Choice* focuses on extreme leadership performance in environments of extreme uncertainty. From an initial list of 20,400 companies, they selected a final set of 10X cases who outperformed their peers relative to the market and relative to their industry. What distinguished all 10xers was their forensic focus on cultural values and long-term goals, alongside performance excellence metrics. In contrast, Greenleaf (1998) introduced the concept of servant leadership, characterized by serving the needs of all stakeholders. What the theory of servant leadership does not offer is a model of excellence in execution that addresses performance, profitability and organizational design. These are omissions in the literature that the 5P Guardian model seeks to address.

2.4 Performance and Operational Excellence

Since its inception, a prime goal of organizational theory has been to understand the determinants and variations in organizational performance and operational excellence (Pfeffer, 1994, 1997, 1998). Of significant interest is the research carried out by McKinsey Global Institute (MGI, February 2023) on the correlation between operational excellence, people care and business growth in generating outsize performance.

McKinsey (2023) analyzed 1,800 large companies across all sectors in 15 countries. They categorized companies as being Performance-Driven, People-Driven or Performance+People (P+P) driven companies. They compared the practices of each category using their Organizational Health Index (OHI) diagnostic and other metrics. The study

confirmed that P+P companies achieved higher returns using a style of leadership that is both consultative and challenging.

They reported that the P+P companies ranked among the most profitable and demonstrated greater earnings resilience, plus greater ability to attract and retain talent. These companies enhanced organizational and operational capital by designing aligned culture and management systems that were agile and innovative. The P+P companies grew revenue 2x faster than Performance-driven companies. P+P companies were 4.3x more likely than the average to maintain top-tier financial performance for 9 out of 10 years. This McKinsey research supports the findings of Peters & Waterman (1982) regarding people at the heart of operational excellence. It supports the people/productivity thesis of Blake and McCauley, (1991) reflected within the 5P model. Related studies by Ulrich, Zenger and Smallwood (1999) and Nohria, Joyce and Robertson (2003) also evidence that performance is an outcome of an intentional approach to organisational culture, such as Guardianship.

2.5 Organizational Culture

Bush's (2018) *A Great Place to Work for All* demonstrates that where leaders prioritize people, business metrics of employee engagement, retention, revenue, stock performance and innovation improve. Doerr (2018) advocates the cultivation of a results-driven culture by integrating Objectives Key Results (OKRs) into the strategic and cultural fabric of the company. Schmidt and Rosenberg (2014) cite OKRs in embedding the mantra of "think big" at Google whilst tracking organizational innovation and financial results. What these studies emphasize is the critical importance of sophisticated performance management systems, alongside soft skills, to catalyze culture around strategy, operations and profitability. All of these insights are crystallized within the work by Keller and Schaninger (2019) that aligns organizational health with change management for outside growth. These

and other distilled insights around performance, leadership and culture have shaped the hypotheses of the study and the evolution of the 5P model.

2.6 Solve for Growth: The 5P Guardian Ecosystem Model

What the review of literature suggests is that sustainable growth is correlated with ethical leadership and pro-people cultures. As already discussed, the world's leading economists (Piketty, 2014; Carney, 2021; Mazzucato, 2021; Edmans, 2021; Susskind, 2024) and Nobel Prize winner (Stiglitz, 2019) conceptualize economic growth primarily in terms of moral choices. The 5P prototype model presented below, signals a *moral model* of the organization where the ethic of Guardianship and NMDC values characterize a stakeholder (Freeman, 1984; Freeman et al, 2010) ecosystem.

Figure 3

5P Guardianship Ecosystem Applied Model, incorporating KAMAL Values



The model draws on theory, already reviewed, that locates business growth within the stakeholder domain of morality and ethics (Freeman et al., 2010; Nadella, 2018; Joly, 2021; Selznick, 1957). The 5P model construes the leader as a social and cultural architect (Pisano, 2019; Ramaswamy and Gouillart, 2010; Nadella, 2018) creating an environment of safety

(Grant, 2023; Edmondson, 2012, 2019) where employee growth drives company growth. Within this theoretical domain, sustainable growth derives from a humanistic paradigm (Hamel and Zanini, 2020; Pfeffer and Sutton, 2006) where organizational design synchronizes people care, organizational health and excellent performance (Keller & Schaninger, 2019; Ulrich, Zenger and Smallwood, 1999; Peters and Waterman, 1982).

Christiansen and Raynor (2003) suggest theory building progresses from the descriptive, to the diagnostic to the prescriptive. These criteria and phasing of model evolution were observed in the development of 5P model. Martin's (2009) three phases of knowledge development, namely, *heuristic*, *algorithmic* and *archetype phases* mapped very easily onto these three stages in the evolution of the prototype model.

2.7 Islamic Leadership Theory

Islamic leadership theory is very specific in advocating that the universal principles of care should shape leadership style, viewing leadership as a form of trust (Agboola, 2020). The Guardian concept of leadership is distributive (Gronn, 2002) where all are invited to grow, to be consulted and to co-create culture and strategy (Ramaswamy & Gouillart, 2010). The concept of Al Tawheed or bringing people together in community is embedded in Islamic leadership theory (Agboola, 2020). It highlights the leadership imperative is to create a healthy workplace, to synchronize the needs of stakeholders and to seek to resolve conflict. A related concept is that of Al Shura or consultation (Hammoudeh, 2016). This resonates with research by Schein (2004) and Feser et al (2018) on the positive impact of consultation on morale. Islamic scholarship (Hammoudeh's, 2016) stresses the imperative to build organizational life around the needs of human beings (Hamel and Zanini, 2020). Coupled with that, every organization is expected to frame a coherent value system as the moral basis for community life. This is the essence of stakeholder theory (Freeman, et al, 2010).

2.8 Gaps in the Literature

Based on the preceding review of literature, there are five areas where this research hopes to make a contribution:

1. Regarding Martin and Moledoveanu's (2007) call for new models that address wicked problems derived from business practice, this paper aims to address that deficit through the 5P Guardian Ecosystem Model.
2. Freeman et al. (2010, p. 287) stress the pressing need for industry best stakeholder practice to build theory that critiques value creation. This research contributes to this gap in stakeholder evidence and theory.
3. Regarding the "virtue effects, complexity and paradox" of business growth, cited by Munger (Kaufman, 2024) as neglected, this working paper presents a case study of ethical growth;
4. Whilst much has been written about principled leadership and servant leadership, what this theoretical field lacks is an operationalized and scalable model at the level of the organization. The 5P ecosystem model of organizational growth presented aims to address this.
5. Finally, the paper aims to contribute to the emergent field of Islamic Management Theory (I. Theory).

3.0 Methodology

Pragmatism informs the research methodology where a key criterion is the usefulness of the research (Wicks and Freeman, 1998). The research is located within the epistemology of Mode 3 knowledge development (Saunders et al, 2023) where the aim is to generate new knowledge that serves business needs and incorporates wider social impact. The methodology includes mixed methods research (Creswell & Plano Clark, 2018), case study (Yin, 2014) and

design thinking (Martin, 2009). This methodological pluralism combines quantitative and qualitative techniques of data collection and analysis (Christensen, Johnson & Turner, 2015).

3.1 Summary of Research Design

The research problem is defined as how to deliver on *growth without compromise* whilst creating the circumstances for growth across the following domains:

- 1) Business growth that delivers on shareholders' demand for persistent profitability;
- 2) People growth that empowers and enables excellence with ethics;
- 3) Personal growth as a GCEO with fidelity to business and ethical principles.

The study tests the twin hypotheses, as follows:

Research Hypothesis 1: Accountable, engaged employees help drive performance.

Null Hypothesis (H₀1): Accountable, engaged employees do not significantly drive performance.

Alternative Hypothesis (H_a1): Accountable, engaged employees significantly drive performance.

Research Hypothesis 2: Guardian leaders enable a culture of business growth.

Null Hypothesis (H₀2): Guardian leaders do not significantly enable a culture of business growth.

Alternative Hypothesis (H_a2): Guardian leaders significantly enable a culture of business growth.

The inquiry, arising from these hypotheses, is framed by three research questions:

RQ1: Does employee engagement help drive company performance and profitability?

RQ2: Is Guardianship a leadership and cultural enabler for growth?

RQ3: Can Guardianship help stimulate a corporate ecosystem for business growth?

3.2 Data Collection Methodology: Employee Engagement and Satisfaction

Aggregated statistical data are presented from the annual NMDC Employee Engagement and Satisfaction Survey (EESS) and company profitability measures for the period 2019 to 2023, with an in-depth analysis of 2022 data. The rationale for an in-depth focus on 2022 data is to gauge engagement levels post company merger.

The hypothesis being tested is *Accountable, engaged employees help drive performance*. The related research question is *Does employee engagement help drive company performance and profitability?*

3.2.1 Aon Hewitt Survey and Survey Sample

The EESS, distributed annually in December across the NMDC Group, is based on the Aon Hewitt Employee Engagement Survey, measuring six critical drivers of employee engagement, namely, *leadership; performance; brand; company practices; the basics and the work*. The NMDC Group comprises five different companies with an employee population exceeding 25,000. This survey is administered online, and individual responses are anonymized. Employees in different departments are provided with a unique survey link to help identify departmental responses and to analyze any correlations or variations between departments. The EESS is designed to provide a snapshot of how the total population perceive their experience at NMDC. Participation in the survey is voluntary, observing all ethical research protocols.

3.2.2 2022 Sample Size

The 2022 survey was sent electronically to 4,740 employees in the Business Units and Corporate Departments. Complete responses were received from 1,434 or 30 percent. Considering the population and sample size, the response rate is regarded as being of sufficient size to provide statistically meaningful figures at a 95% confidence level and the margin of error at 2%.

3.3.3 Survey Data Likert Scale and Statistical Analysis

The Performance Target in 2022 was reduced from 85% to 80%, to take account of the merger the previous year. A rating scale of five (5) is used to measure satisfaction levels for each dimension of organizational performance. The ratings scale is 5 for ‘Strongly Agree’ whilst 1 represents ‘Strongly Disagree’. The performance scores are converted into their percentage equivalent and assessed against the performance target of 80%. The gap size is the difference between actual performance and the target. Likert scale frequency analyses of EESS data are augmented by Chi-square and ANOVA statistical analyses affording insights into variation in survey responses.

3.4 Case Study Research and Design

Case study is suited to surfacing insights into culture that quantitative approaches alone may not capture. The study’s research problem of business growth encompasses questions of process that case study can address (Yin, 2011; 2014). NMDC’s growth strategy is characterized by mergers and acquisitions (M&A), strategic partnerships and spin-offs (Achtenhagen, Ekberg & Melander, 2017). These have organizational, leadership, cultural implications suited to case study methodology.

The hypothesis shaping case study design is that *Guardian leaders enable a culture of business growth*. The specific question driving the case study is whether *Guardianship is a leadership and cultural enabler for growth?*

The case study hypothesis is tested through data analysis that encompasses a baseline culture assessment carried out in 2019 across three variables of leadership mobilization, culture audit and change management. Additional behavioral competency survey data is used to assess the gap between the desired and actual culture. This data is triangulated with an ANOVA statistical analysis.

3.4.1 Case Study Unit of Analysis

The case study unit of analysis is employee education and change management processes arising from a culture change program. Within this unit of analysis, specific attention is paid to leadership behavioral competencies. The case study involved all employees and leaders engaged in the change program from its inception in 2019 to 2023. Data was gleaned from monthly reports, workshops and bespoke behavior change surveys relevant to the culture change program. The data was analyzed with reference to regular program reports set against targets and the analysis of periodic surveys.

3.4.2 The Case Study Culture Change Program

A four-phased culture change program was initiated in 2019, two years prior to a merger in 2021. The aim was to build capacity for cultural integration pre-merger and to progress to business transformation post-merger. The case study's data collection methods included leadership feedback, participant observation, workshop/course participation data and survey analysis (Johnson et al., 2020). A range of data was analyzed to assess culture change progression, across four successive phases of 1) preparing 2) defining, 3) embedding and 4) sustaining change from 2019-2023. The data included a baseline assessment to measure company culture prior to commencement of the program in 2019; assessment of leadership buy-in; a company culture audit, drawing on needs and situational analysis tools, to identify desired cultural preferences; change management planning to establish viable timeframes and resource plans to embed change. The culture change implementation strand had three areas of focus, where

- 1) Each team defined its preferred culture to live NMDC values.
- 2) Teams designed plans to shape desired culture.
- 3) Cross-teams developed action cultural plans committing to advance NMDC growth goals.

3.5 Case Study Generalizability

Case study *analytic* generalization demands mobilization of sound argument rather than presentation of *proof* as in the logic of geometry. Cronbach (1975) argues that case study generalization should be seen in terms of new propositions or working hypotheses supported by case study evidence, rather than an absolute statement of proof (Lincoln and Guba, 1985, pp.122-123). Case study analytic generalization as *argument* aims to pose a *proposition at a conceptual level* higher than that of the specific results. The findings are intended to demonstrate rigor in research design and data coherence with the theoretical foundation of the study.

This research framework takes account of the ethical 17 sustainable goals of the United Nations and all requisite ethical protocols for doctoral level research.

4.0 Results Overview: Employee Engagement and Satisfaction

The first part of the results reported relate to statistical analyses of employee engagement and satisfaction across the NMDC Group from 2019 to 2023, with deep focus on 2022 data. The hypothesis tested is that accountable, engaged people help drive performance which derives from key variables within the 5P model and review of relevant research. The primary question driving the data generation is whether accountable, engaged employees help drive performance and profitability. This part of the study has four discrete elements:

1. The statistical and comparative data relating to employee engagement and satisfaction survey (EESS) data are reported from 2019-2022, using the Aon Hewitt Employee Engagement Survey Tool. This measure six factors, namely *leadership; performance; brand; company practices; the basics and the work*.
2. An in-depth analysis of EESS data for 2022 is presented. Likert scale, Chi-square and ANOVA statistical analyses are used to discern trends and variances in the data.

3. Financial data over 2019-2023 are reviewed, mapping the trajectory of profitability.
4. The EESS and financial data are considered within the broader framework of the Employee Performance Management System (EPMS). The EPMS is considered as a potential mediating factor enhancing performance. The Guardian Growth and Enterprise Model (2GE) is presented as a research output, amplifying the performance segment of the 5P Guardian Ecosystem Model.

4.1 Employee Engagement for Growth and Performance: Research Evidence

The definition of employee engagement used within this research is multi-faceted (Li Sun, 2019; Macey and Schneider, 2008). The evidence base reviewed found a positive association between employee engagement and performance outcomes (Johnson, 2004; Levinson, 2007; Cleland et al, 2008; Christian et al., 2011). A key finding of Young and Gifford's (2021) study is that employee engagement levels are predictors of performance (Bakker and Demerouti, 2008). The research suggests that organizations with higher engagement levels tend to have higher productivity, higher total shareholder returns (TSR), lower employee turnover and better financial performance (Baumruk, 2006).

4.2 Aggregated EESS Results Profile 2019 - 2023

The summary profile of EESS analysis from 2019 to 2023 suggests a significant leap in improved ratings from 2019 (78.14%) to 81.75% in 2020. That leap may be attributable to the launch of the integration project within the culture change program in 2019. The rating declined marginally in 2021 and 2022, but in 2023 there is an upturn. This pattern would suggest a smooth post-merger transition.

Figure 4

EESS Results (Annual)

Year	Overall Employee Satisfaction	Targets
2019	78.14%	85.0%
2020	81.75%	85.0%
2021	81.64%	85.0%
2022	80.24%	80.0%
2023	80.40%	85.0%

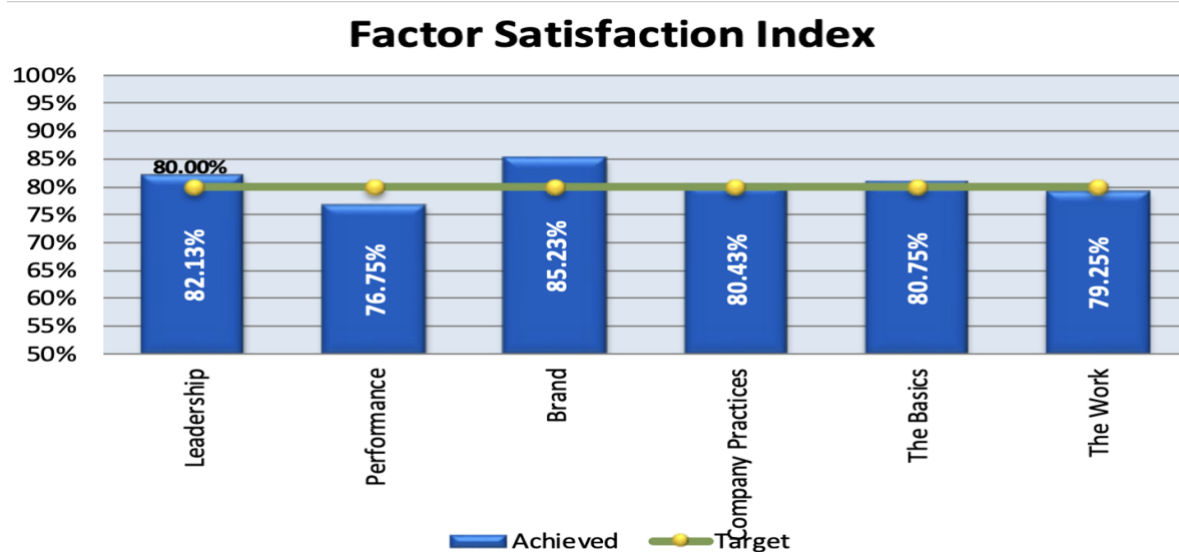


4.3 Employee Engagement and Satisfaction Survey Results December 2022

The 2022 EESS data affords insight into employee satisfaction following the merger in 2021. In the interests of parsimony, I report on the headline results. The NMDC Group achieved just above target at 80.24% in 2022, representing a slight fall in satisfaction when compared with the two previous years. The 2022 aggregated results across the six performance factors present a more nuanced picture of engagement and satisfaction levels.

Figure 5

2022 Aggregated EESS Results by Factor Satisfaction Indices



Brand strength is awarded the strongest rating, followed by Leadership. Performance and The Work, did not achieve the 80%target. The weakest area is satisfaction with Performance which seems at odds with the high rating for Brand strength. The summary recommendations below offer targeted points for action and monitoring, demonstrating use of the EESS data to inform strategic planning agendas.

Table 2

Summary of Recommendations and Areas of Improvement

Dimension	Areas for improvement	Recommendation
Leadership	The information flow downward is not structured and Managers may be open to input but may choose not to take action	<p>Review the current Senior Management communication channels to ensure that information flows from management to staff and vice versa to improve employee's confidence in Senior Management</p> <ul style="list-style-type: none"> • Conduct more of Company gathering and meet CEO • Review the "Afaq" program to include suggestions as well as innovations and communicate success stories
Performance	HR Policies related to performance are not clear or communicated	<p>Develop and Communicate HR Policies and Procedures (Transparent Criteria for: Career advancements, Transfers, Promotion etc)</p> <ul style="list-style-type: none"> • Update and circulate the employee handbook and consider: <ul style="list-style-type: none"> ▪ Online portal ▪ Review Orientation programs for effectiveness ▪ HR Policy Workshops
	There is no effective program/policy / guideline for reward and recognition	<p>Develop and communicate the HR Policy for Reward and recognition criteria.</p> <ul style="list-style-type: none"> • Make the criteria transparent • Communicate success stories via Company News Letter
Brand	Brand strategy is clearly communicated	<ul style="list-style-type: none"> • Continue to communicate the brand strategy to all employees' especially new employees to achieve the target for this factor. • Celebrate success stories with regard to environmental and social responsibility
Company Practices	HR policies, procedures, process and practices related to retaining a superior workforce are not clearly communicated	Review & communicate Grievances / complaint procedure
		Review and revise HR Policy for retaining and developing staff

For the Leadership factor, greater focus on communications channels is highlighted. The Performance factor identifies HR policy clarification and further work to be done on rewards and recognition. As Brand factor was an area of considerable satisfaction, the action is to consolidate it. HR policies and practices are a priority area for improvement in Company Practices. The table below summarizes the points of action and review for The Basics and The Work.

Table 3*Summary of Recommendations for The Basics and The Work*

Dimension	Areas for improvement	Recommendation
The Basics	There is a perception that wages and benefits are not market related or are not applied correctly and negatively impact work/life balance	Review the compensation policy and manage perceptions regarding benefits
The Work	The survey indicates that the employees are not satisfied with the job and their positions	Conduct a study to identify possible causes and determine actions required to improve job satisfaction.
	There is a perception that Managers and direct supervisors do not encourage and appreciate their staff for their participation in teamwork and having team spirit	Develop a system that enables and encourages best practice sharing

The Basics data suggests a need to review of the compensation policy. More targeted follow up work is identified for The Work to probe causes of dissatisfaction with jobs or positions. Greater appreciation of staff for teamwork and team spirit is identified as a managerial priority to be better addressed. Sharing of best practice is also identified an action point.

4.3.1 Chi-square Statistical Analysis of 2022 EESS Data

In order to offer more nuanced insights into levels of variance within the headline EESS data of 80%+ engagement and satisfaction, Chi-square statistical analyses were carried out, augmenting the Likert scale frequency analysis. A Data Frame was created to organize the responses with reference to the six key factors Leadership; Performance; Brand; Company Practices; The Basics; The Work. Below is the breakdown across the five rating scales, ranging from Strongly Disagree to Strongly Agree. The Chi-square analysis of EESS data reveals significant variances across the six key factors as evident in the table below.

Table 4*Breakdown of Results for Six Factors across Rating Scales*

Key Factor	Strongly Disagree	Disagree	Partially Agree	Agree	Strongly Agree
Leadership	96	238	1112	4370	2885
Performance	502	1052	2798	7613	3820
Brand	53	142	810	4095	3510
Company Practices	124	290	1195	4674	2327
The Basics	220	446	1539	5757	3518
The Work	187	511	1737	6160	2885

These levels of variance highlight areas where more targeted work might be undertaken to enhance employee engagement or satisfaction levels. These findings are consistent with the EESS Likert scale analysis already reported. Interestingly, factors like Leadership and Brand show relatively lower variation.

The Chi-square results highlight significant differences in the response distribution across factors in the dataset. With a test statistic (X-squared) of 1713.8 and degrees of freedom (df) of 20, the test reveals a substantial deviation between observed and expected frequencies. The p-value ($>2.2E-16$) confirms that these differences are significant, well beyond the conventional threshold of 0.05. This suggests that the variations are not due to random chance. The null hypothesis is rejected.

Whilst the aggregate score under the Likert scale analysis indicates relatively stable levels of employee engagement and satisfaction ($< 80\%$) overall, the Chi-square tests suggest both strengths and potential inconsistencies in how these factors are managed across the organization. An additional ANOVA analysis was carried out to augment the Chi-square test insights.

4.3.2. ANOVA Analysis of 2022 EESS Data

Presented below is the between groups and within groups ANOVA analysis, highlighting total SS and total df, derived from the 2022 EESS survey data.

Table 2

Single Factor ANOVA Analysis Table

<i>Value</i>	<i>Between Groups</i>	<i>Within Groups</i>	<i>Total</i>
SS	1.14E+08	1.36E+07	1.27E+08
df	4	25	29
MS	2.86E+07	5.43E+05	-

The high between groups sum of squares (SS) of 1.14E+08 and mean square (MS) of 2.86E+07 show significant variability between the different response categories. In contrast, the within groups SS of 1.36E+07 and MS of 5.43E+05 indicate that the internal variability within each category is relatively low.

The Single Factor ANOVA analysis of the EESS survey data reveals significant differences between the five groups (Strongly Disagree to Strongly Agree) compared to the variance within groups. This is evidenced by the high F-value (52.272), which is substantially larger than the F crit value (2.75871). The extremely low P-value (8.75E-12) further reinforces the significance of these differences, indicating that the observed variations among group means are highly unlikely to be due to random chance. The null hypothesis is rejected.

These findings imply that respondents' ratings of the various factors in the survey are distinct and varied. From a strategic or cultural perspective, focusing on areas with high variability can guide efforts to improve employee satisfaction.

4.4 NMDC Financial Performance in 2022

NMDC's employee engagement and satisfaction survey met its target of 80.00% in 2022. In 2022, NMDC shifted focus from integration to transformation, to unlock post-merger potential across the Group.

NMDC financial performance in 2022 was strong across every key indicator, with revenue totaling AED 10.69 billion, a 35.45 percent increase from the previous year, and net income reaching AED 1.30 billion, marking a 30.02 percent rise compared to 2021. NMDC strengthened the balance sheet, with assets reaching AED 16.05 billion, a 24.22 percent improvement from 2021, with shareholder equity increasing to AED 6.54 billion, a rise of 18.52 percent from 2021. The employee turnover rate for 2022 was a mere 3.4%.

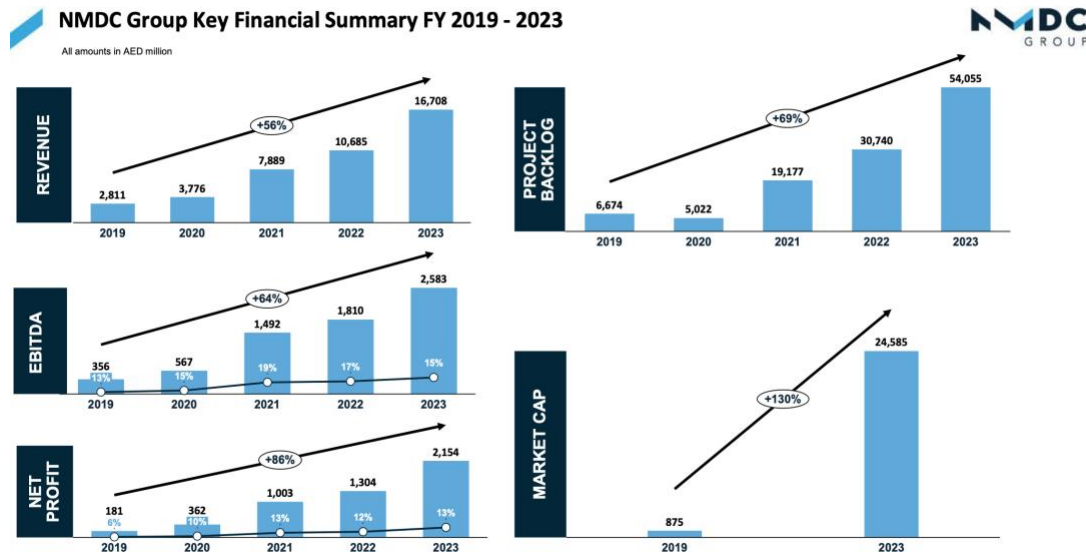
4.4.1 Financial Data Analysis 2019-2023

From 2009 to 2023 NMDC's business growth increased more than fifteen-fold. In 2023, NMDC achieved 1.6 times increase in business growth compared to 2022. Growth was driven by expansion into new markets, and investment in people and technology. The strategy was vertical growth via M&A and horizontal expansion through partnerships and spin-offs. The data on profitability from 2019 to 2023 suggests that this growth strategy, coupled with cultural transformation, worked.

From 2019 to 2023 revenue increased from 2,811 AED million to 17, 708 AED million in a steady upward trend, representing a +56 percent increase in revenue. Despite the merger in 2021, there was no dip in revenue or profits. Net profit increased by +86 percent between 2019 and 2023. The diagram below illustrates the data on Net Profit, EBITDA and REVENUE, Market Cap and Project Backlog from 2019 to 2023.

Figure 6

NMDC Group Key Financial Summary 2019-2023



Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) is used by investors to evaluate a company's financial performance and compare it to other companies in the same industry. It provides a reliable picture of a company's underlying operating performance by excluding non-operating expenses. Between 2019 and 2023 the EBITDA had increased by +64 percent. The trend across revenue, net profit and EBITDA was in an upward spiral with significant increases year by year.

Market capitalization is a measure of a company's total value in the stock market. It is calculated by multiplying the total number of outstanding shares of a company by the current market price per share. Market cap is often used as a key metric for determining a company's ranking in an industry, its growth potential, and its risk profile. The market cap grew +130% between 2019 and 2023, which signals stability with potential for further growth.

The project backlog figures from 2019 to 2023 continue the upward trend with an increase of +69 percent, indicating that the company has a steady stream of work lined up. This provides visibility into future revenue and cash flow. It suggests that the company has a strong market position and a solid reputation within its industry.

4.5 Discussion

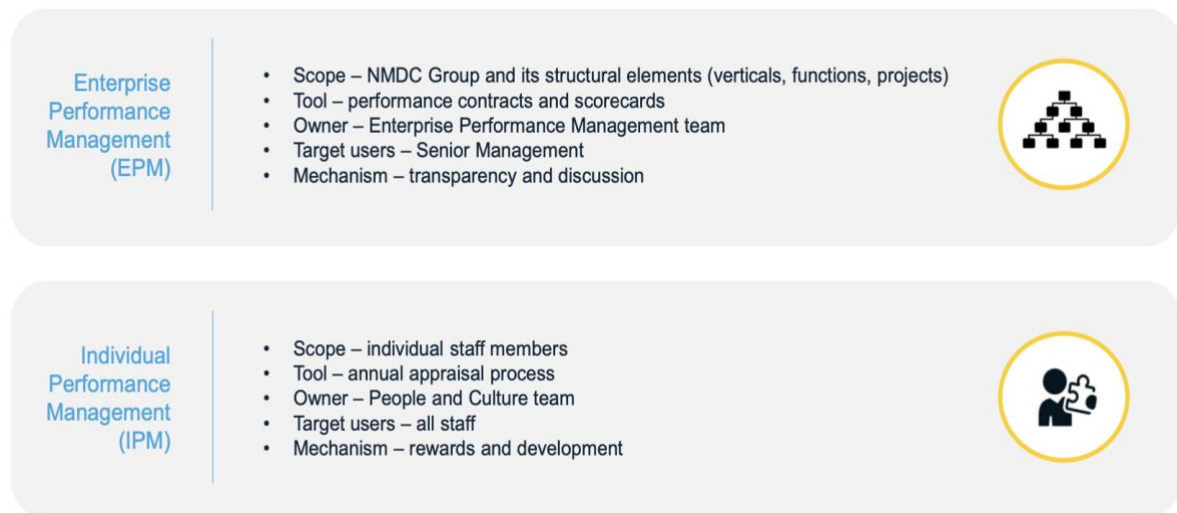
What the EESS data suggest are surprisingly stable employee satisfaction levels, coupled with an upward inflection on profitability, across all financial measures. The research hypothesis that accountable, engaged people drive performance is proven by association. In posing questions about the possible causes of stable employee engagement or sustained profitability, we enter the terrain of causal inference. Causality in the social sciences is notoriously difficult to prove (Collins, 2001). Ironically, most introductory statistics textbooks, omit any reference to inferential causality (Pearl, Glymour and Jewell, 2016). In interrogating the data, we are confronted by the causal question *could high employee engagement be a proxy for high company performance?* The problem with this type of question, according to Pearl et al. (2016) is that it cannot be answered, or even articulated, in the traditional language of statistics. In the absence of an agreed statistical tool or model to test the question of causality (Pearl et al 2016), what is attempted is to make transparent how the data was created and to make visible the context from which it arose. It is worth considering other contextual synergies that may have propelled employee engagement towards the levels of performance and profitability reported.

4.6 The System behind the Numbers: Differentiated Performance Management System

In order to leverage the merger potential, in 2022 NMDC launched a culture transformation program in parallel with a differentiated performance management system. The differentiated Employee Performance Management System (EPMS) was built around two integrated tools. The first was designed to drive enterprise at the leadership level. The second related to the translation of strategic objectives into actionable goals at the individual level. The diagram below illustrated the twin technologies of Enterprise Management Performance (EPM) and Individual Performance Management (IPM) through which Group strategic objectives were cascaded systemically

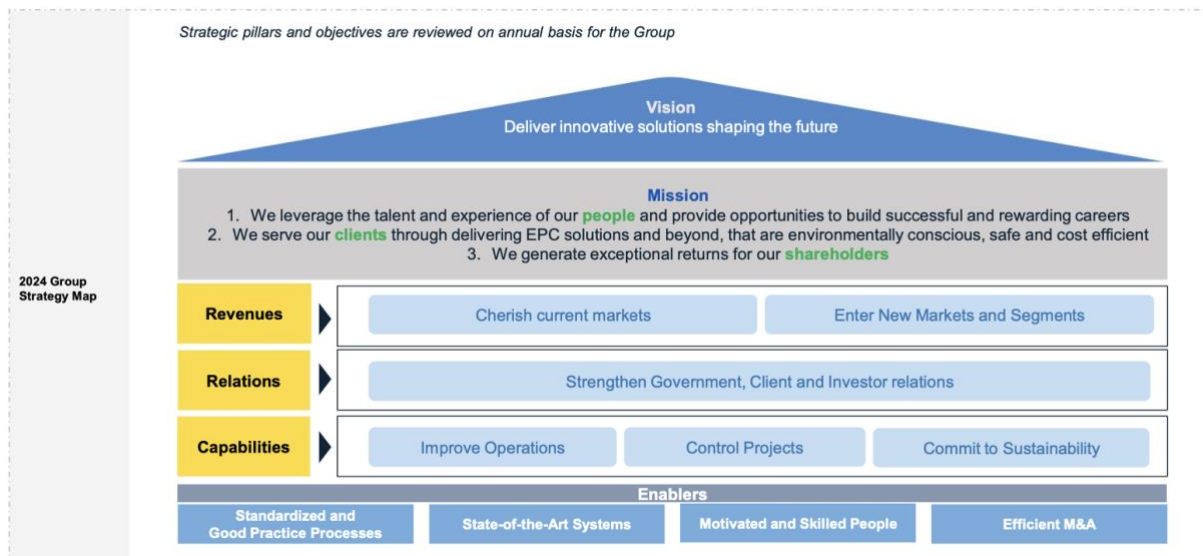
Figure 7*Performance Management at NMDC Group***1. Performance Management at NMDC Group**

Involves two integrated tools working together to drive performance improvement



What EPM highlights is that performance at senior management level is precisely defined. EPMS was a highly calibrated system. Vision, mission, and strategic enablers were clearly articulated alongside clarity on revenue streams, key relationships, and core capabilities. The entire system recognised the importance of engaged employees, as evident from the Group Strategy Map model below.

Figure 1*Group Strategy Map 2024*



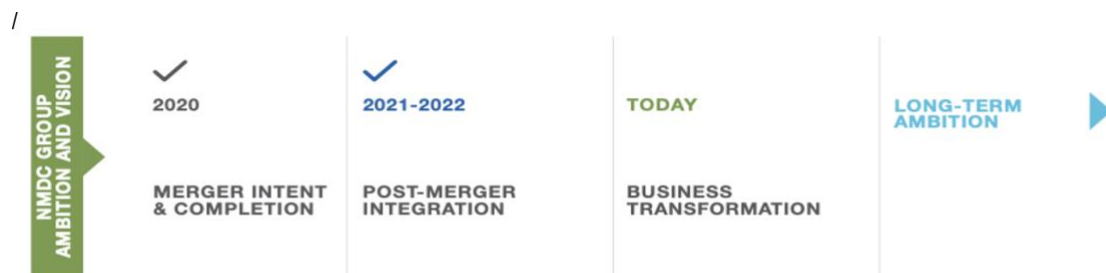
The Group Strategy Map and differentiated performance management system are conceptualized as a synchronized, integrated ecosystem.

4.7 The Transformation Program focus on People, Systems and Processes

When the Transformation Program was launched in 2022 that aim was to increase business efficiency and effectiveness, post-merger. The phasing of the Business Transformation project was aligned with the Company's long term strategic vision as illustrated in Figure 9 below:

Figure 9

NMDC Ambition & Vision



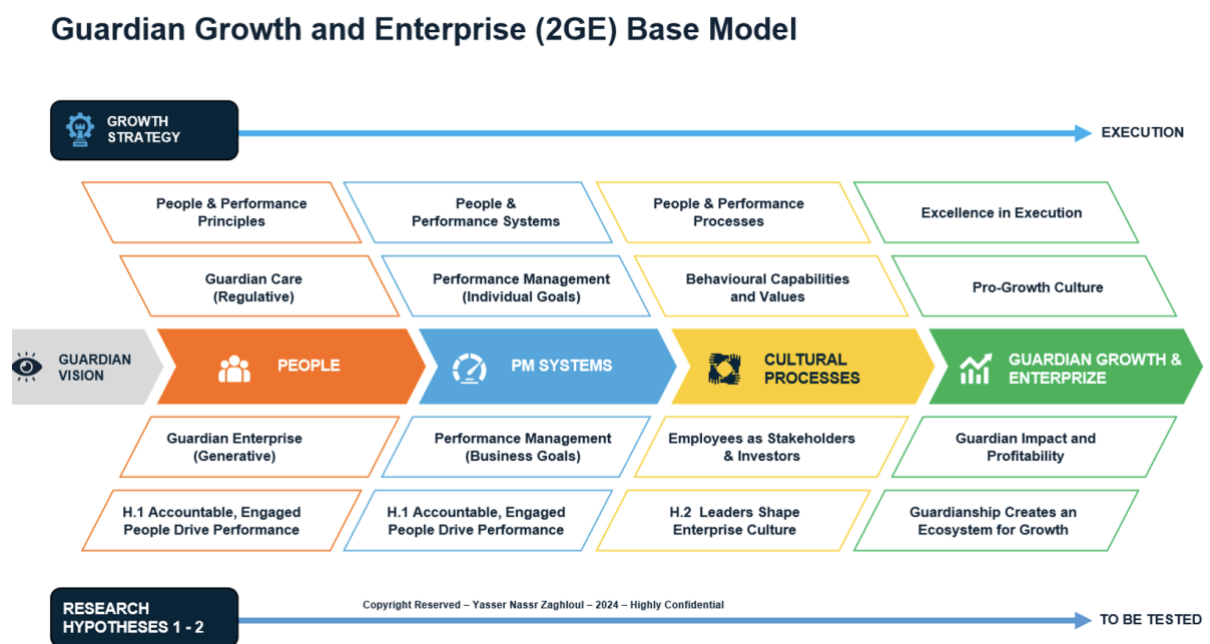
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The aim was to strengthen the agility of the organization across people, systems and processes functions, applied to Corporate, Engineering, Procurement and Construction areas.

The mapping of a conceptual model for guardian growth and enterprise (2GE), as a sub-set of the 5P Model started at this time. The progressive development of the 2GE Base Model helped to map the efficiency dimensions of people, systems, and processes in terms of *operational excellence* (McKinsey, 2023) It enabled clarification of systemic and cultural interdependencies essential for a high-growth culture, employee engagement metrics. These interdependent elements are illustrated in the Base Model of Guardian Growth and Enterprise (2GE) below.

Figure 10

Base Model: Guardian Growth and Enterprise (2GE)



This model above illustrates the shifts and synergies from Guardian vision to a Guardian growth and enterprise outcome, mediated by engaged employees and empowered leaders shaping a pro-growth culture.

4.8 Part One Results Summary

The EESS and financial data presented suggest a high level of correlation between people engagement and performance over 2019-2023. The research hypothesis is that *accountable, engaged employees help drive performance*. The null hypothesis is rejected, but

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the relationship is not linear; it is more nuanced and ecosystemic than a simple input-output model. The caveat is that performance is an outcome of other mediating variables, such as performance management systems and culture. The Guardian Growth and Enterprise (2GE) Base Model aims to capture those more nuanced interfaces underneath the performance segment of the 5P model. The case study results that follow signals the interplay between culture and Guardian leadership in shaping the conditions for growth within a business ecosystem.

5.0 Results Part 2: Culture Change Program

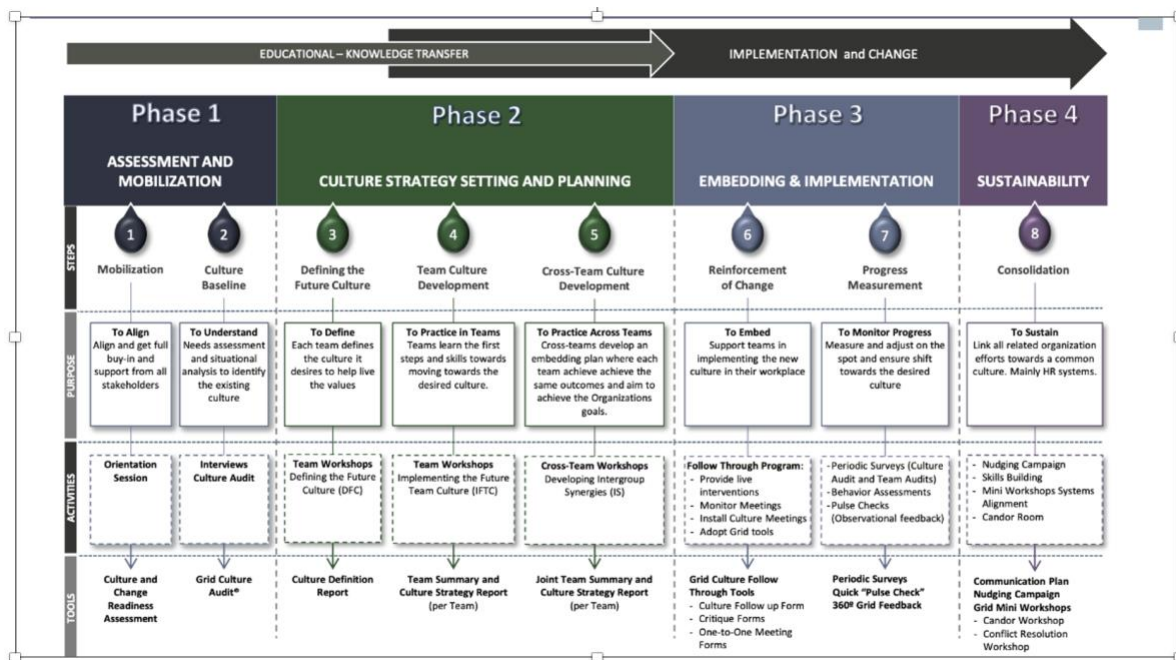
The case study tested the hypothesis that Guardian leaders enable a culture of business growth. This question guiding the inquiry was whether Guardian leaders enable a culture of growth? What the findings signal is that for leaders to enable a culture of business growth, they need the ongoing support of educative cultural programs that align behavioral competency development with bespoke performance management systems. The case study dataset probes the culture change program 2019 to 2023 and inquires into culture change processes, aligned with performance management systems, where the unit of analysis is employee and leadership education.

5.1 Culture Change Program and Business Transformation 2019-2023

The diagram below offers a self-explanatory overview of the four-phased culture change program. It summarizes the purpose and steps of each phase, coupled with defining activities and bespoke tools to assess and monitor progression through to sustainability.

Figure 11

Culture Change Program: Phases, Components and Outputs

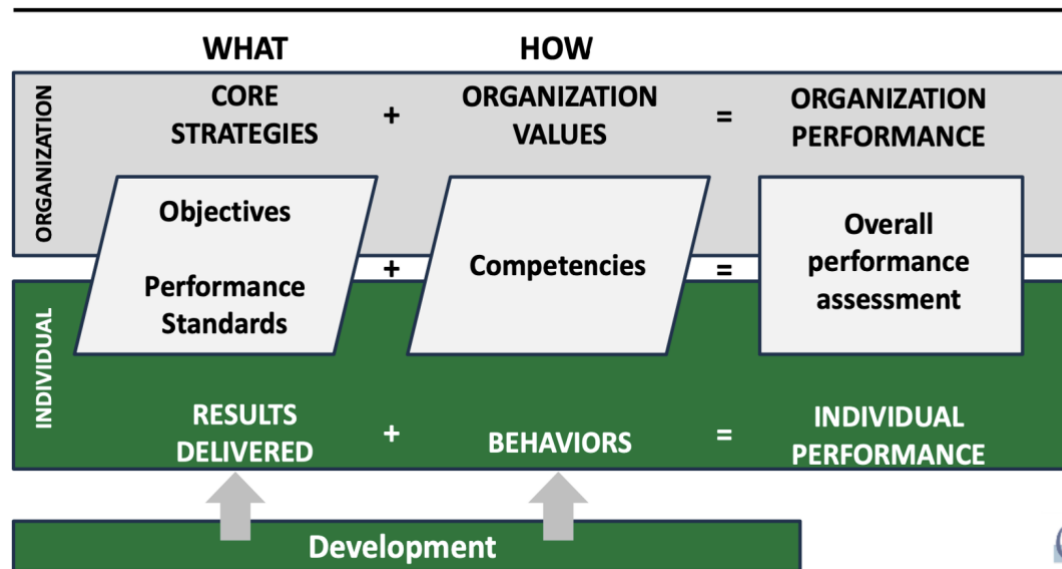


A new phase of the culture change program was initiated from 2022 focused on *Living the Values*, calibrated around building a culture supportive of future growth. The focus was business transformation and the development of a high-performance culture characterized by cultivation of specific behavioral competencies and lived values. The performance management system comprised the twin tools of Enterprise Performance Management (EPM) and Individual Performance Team Summary Management (IPM). The IPM system was fully aligned with strategy, values and key competencies as this model below illustrates.

Figure 12

Components of a Sustainable Performance Culture

Components of a sustainable performance culture

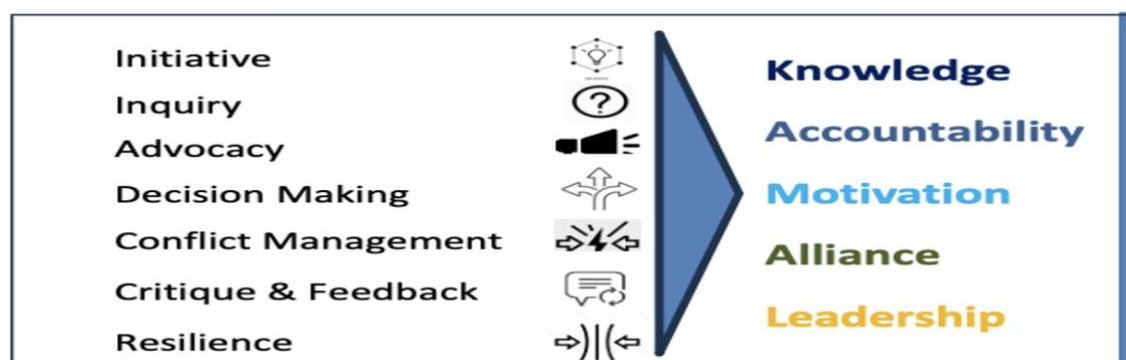


5.1.1 The Behavioral Competencies Framework

The seven behavioral competencies listed below were identified by Blake and McCanse (1991) and developed into a psychometric tool. NMDC re-purposed Blake and McCanse's management technology into a bespoke behavioral competency framework, aligned with KAMAL values within a unified performance management and culture change system.

Figure 13

Leadership Competencies aligned with NMDC KAMAL Values



The culture change program, allied to a sophisticated behavioral competency and performance system, was a key enabler for creating an interdependent, growth culture. The

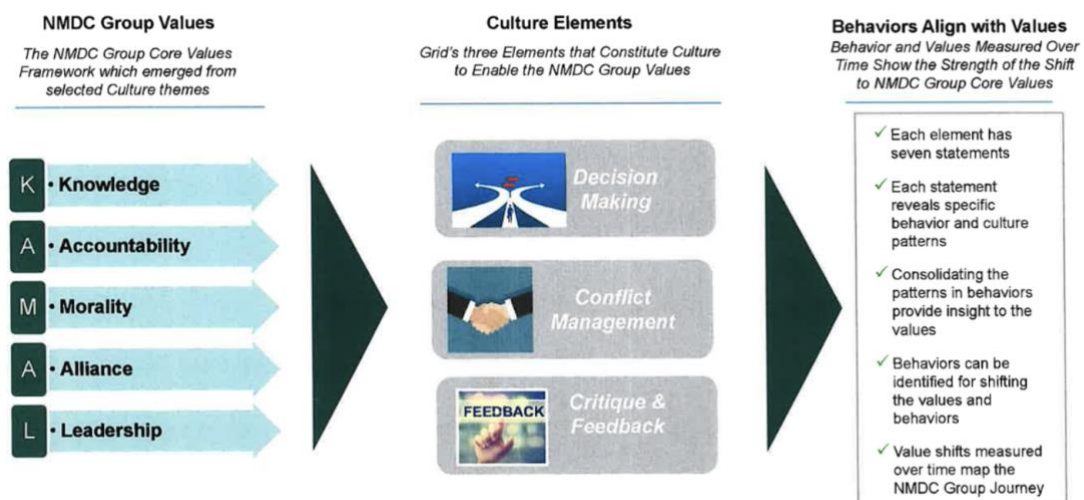
culture gap style categories were *opportunistic, indifferent, accommodating, status quo, controlling, paternalist and interdependent*. The interdependent culture style was regarded as the ideal culture for enabling collaboration, teamwork and trust.

5.1.2 Behavioral Competency Culture Survey Methodology 2023 - 2024

In order to give depth and nuance to the behavioral competency framework in action, data is presented with regard to a culture survey from February 2023 and February 2024. The survey rationale and methodology are presented below, graphically. It illustrates the close alignment of NMDC Group values with the three behavioral cultural elements, and the methodology for measuring value shifts over time.

Figure 12

The Survey Methodology



The number of people invited to participate in the 2023 survey was 182 and 73 people responded, which is a participation rate of 40%. The number of people invited to participate in the 2024 survey was 1,180 and 859 people responded, which is a participation rate of 72.8%. The increase in the participation and response rates is significant signaling a more positive view of the survey and its focus.

The three behavioral competencies surveyed included *decision-making* (how people evaluate resources and consequences to reach decisions), *conflict management* (how people manage differences and conflict) and *critique and feedback* (how people use critique and feedback in day-to-day teamwork). These three behaviors were selected from the list of seven, cited earlier, as being most challenging for leadership.

5.1.3 Headline Findings: Survey Data Analysis

The NMDC baseline score in February 2023 and 2024 is low for Interdependence, based on the Blake and Mouton (1985) GRID. In February 2023 it was almost at the baseline of 23%. By February 2024, that rating had fallen to 15.4% which is a significant drop. It highlights the continuing work needed to support leaders in building competencies around conflict management, critique and feedback and decision-making, with data for each competency reported below:

Figure 13

Interdependent Culture for Conflict Management Survey Results

NMDC Group's Percentage of Interdependent Culture for Conflict Management has improved drastically since the first audit, and this is due to the practiced culture of openness and increased Candor

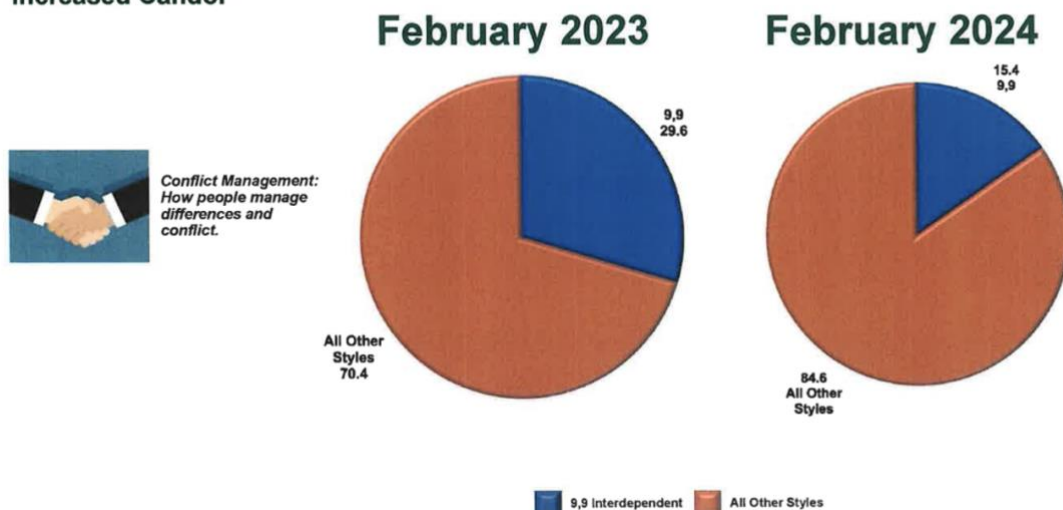


Figure 14

Interdependent Culture for Decision-Making Survey Results

NMDC Group's Percentage of Interdependent Culture for Critique and Feedback did not improve, which is quite normal since most of the people were still at the first stage in the culture journey

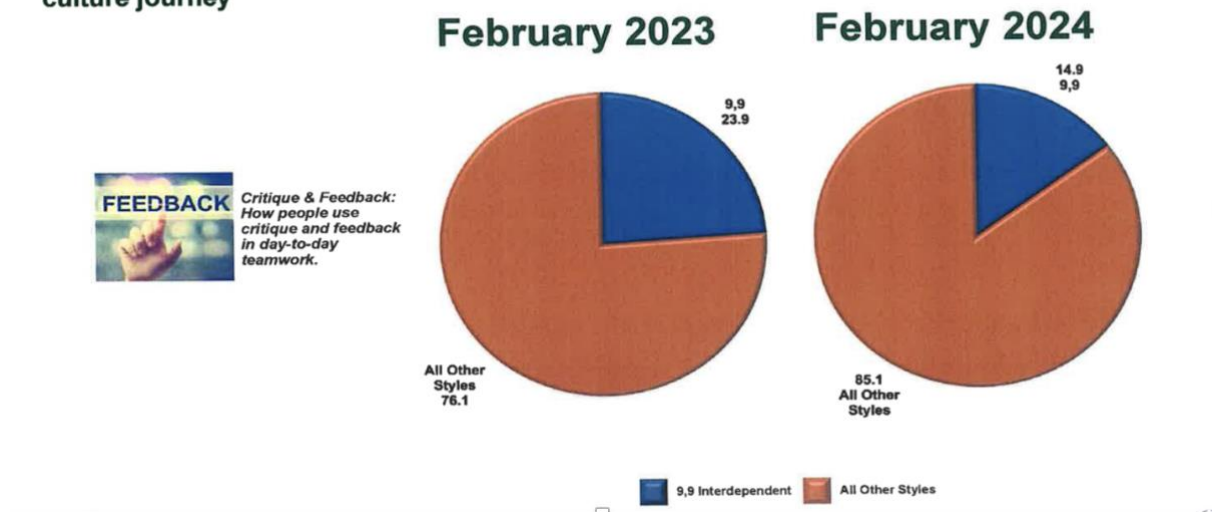
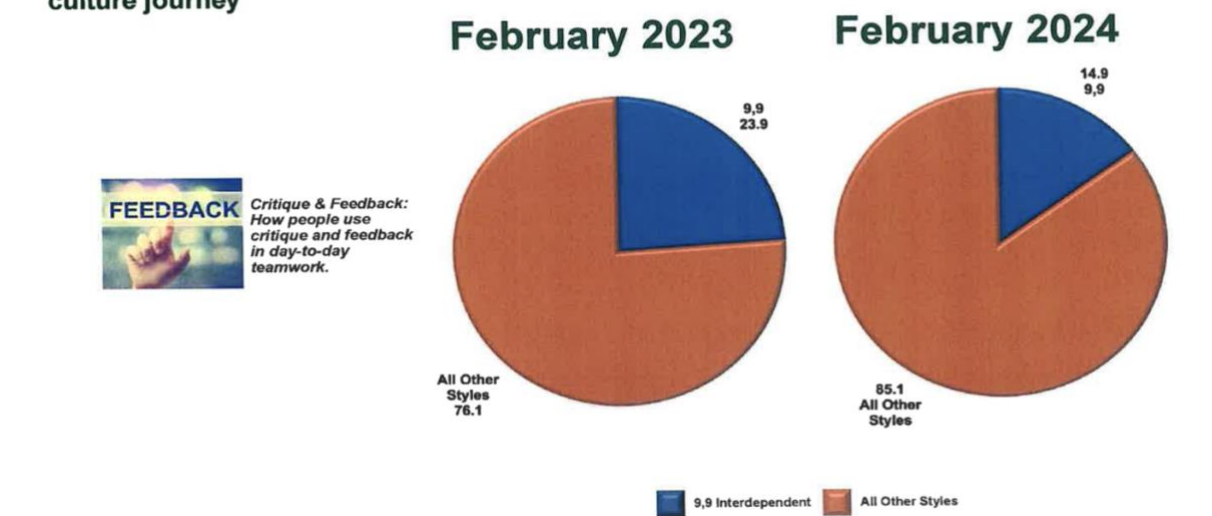


Figure 15

Interdependent Culture for Critique and Feedback Survey Results

NMDC Group's Percentage of Interdependent Culture for Critique and Feedback did not improve, which is quite normal since most of the people were still at the first stage in the culture journey



The data analyzed considers the research hypothesis that “Guardian leaders enable a culture of business growth”. The data also suggests that the development of such leadership competencies at scale is challenging and demands considerable investment of cultural, business and systemic resources to achieve the desired standards. From 2024 the culture change management evolved into an *ongoing culture change system*, under the leadership of the newly formed People and Culture Team. What the comparison survey data suggests is

that these behavioral competencies are in development. In order to drill down more thoroughly on patterns and trends in the cultivation of these behaviors, an ANOVA test was carried out on the 2024 data.

5.2 ANOVA Single Factor Analysis: Leadership Behaviors and Culture Trends

A Single Factor ANOVA analysis of 2024 GRID data focusing on three specific leadership behaviors, reveals significant differences across decision-making, conflict management, and critique & feedback.

Table 6

Behaviors Results Summary Table Between Groups

Metric	Decision-Making	Conflict Management	Critique & Feedback
SS	1.08E+04	1.28E+04	8.68E+03
df	6	6	6
MS	1.81E+03	2.14E+03	1.45E+03
F-value	52.272	23.848	12.073
F crit	2.323994	2.323994	2.323994
P-value	2.37E-10	4.62E-12	7.71E-08

The ANOVA analysis underscores significant differences in respondents' ratings across the three leadership competencies. The highest variability is observed in decision-making, followed by conflict management and critique & feedback.

5.2.1 Decision-Making

Decision-making shows a very high F-value of 52.272, significantly above the F crit value of 2.323994, and an extremely low P-value of 2.37E-10. This indicates substantial variability between the group means, confirming the statistically significant differences in how decision-making is perceived and rated among respondents.

5.2.2 Conflict Management

Conflict management also demonstrates significant differences with an F-value of 23.848, which is well above the F crit value, and a P-value of 4.62E-12. These metrics

highlight considerable variations in respondents' ratings, indicating divergent views on conflict management practices.

5.2.3 Critique & Feedback

Critique & feedback, while showing an F-value of 12.073, still exceeds the F crit value, with a P-value of 7.71E-08. This demonstrates statistically significant differences, albeit less pronounced than the other two competencies, suggesting varying perceptions among respondents.

Visibility of a defined trend towards an interdependent culture is even more evident in the table below that shows the breakdown of behaviors with reference to seven culture gap styles. The interdependent style is the preferred, ideal cultural trend for NMDC. The culture gap style definitions are listed below:

Controlling (Direct & Dominate)

Accommodating (Yield & Comply)

Paternalistic (Prescribe & Guide)

Status Quo (Balance and Compromise)

Indifferent (Evade & Allude)

Opportunist (Exploit & Manipulate)

Interdependent (Collaborative & Cooperative)

Table 7

ANOVA Metrics Breakdown by Leadership Behaviors and Culture Gap Styles

Culture Gap Type	Decision-Making	Conflict Management	Critique & Feedback
Opportunism	0	0	0
Indifference	1.7143	1.4762	3.7857
Accommodating	2.1429	13.6905	18.619
Status Quo	2.3333	10.0476	10.8571
Controlling	2.6667	4.4762	22
Paternalism	11.2857	19.6905	10.8333
Interdependent	44.1429	50.619	43.9048

The table summarizes the average scores for the Culture Gap styles across the leadership behaviors of decision-making, conflict management, and critique & feedback.

ANOVA statistical analysis reveals a clear trend towards the ideal, interdependent (9,9) culture. *Interdependent (9,9)* consistently has the highest average scores (44.1429 for decision-making; 50.619 for conflict management; and 43.9048 for critique & feedback).

Given that the interdependent cultural style is the strongest, we can infer from this analysis, that the principle of Guardianship, with its focus on care and collaboration, is shaping how leaders are progressing towards an interdependent culture. The null hypothesis is rejected.

5.3 Summary

What the case study highlights is the importance of ongoing culture change efforts, coupled with a sophisticated, differentiated performance management system in supporting entrepreneurial leadership and a pro-growth culture. This behavioral and values-based cultural solution is counter-intuitive for what is a strategic, business problem of growth. The paradox is that business growth arises from people growth, but only under the circumstances where cultural processes and differentiated performance management systems are fully synchronized.

Schein (2004) agrees that any analysis of culture must include a theory of context for tomorrow's world which he describes as "different, more complex, faster paced and more culturally diverse" (2004, p.393). He infers that "organizations and their leaders will have to become perpetual learners" (2004, p.393). This insight is reflected in the case study unit of analysis of employee and leadership education. The 5P model signals the strategic, people, performance and practice synchronicities that must be managed across a company ecosystem so leaders can adapt, learn and shape a pro-growth culture.

5.4 Significance of Results

Arising from the review of literature, and the data presented, there are five areas where this research contributes to new knowledge and understanding:

1. Regarding Martin and Moledoveanu's (2007) call for new models that address wicked problems derived from business practice, this paper addresses that deficit through the 5P Guardian Ecosystem Model.
2. Freeman et al. (2010, p. 287) stress the pressing need for best stakeholder practice to build theory that critiques value creation. This research draws on NMDC practice to address the gap in stakeholder theory.
3. Regarding the "virtue effects, complexity and paradox" of business growth, cited by Munger (Kaufman, 2024) as neglected, this working paper presents an NMDC case study and model of ethical growth.
4. Whilst much has been written about principled leadership, what this theoretical field lacks is an operationalized and scalable model at the level of the organization. The 5P ecosystem model and 2GE model address this deficit.
5. The paper contributes to the emergent field of Islamic Management Theory (I. Theory) through its study of Guardian leadership.

5.6 Limitations of the Study

The limitations of the study are that it has been carried out at one UAE-based company only, albeit a large corporate group with global reach. What has not been tested is how the model might scale in a different company or sector, with less commitment to growth or people care, or with CEO tenure of less than sixteen years.

6.0 Conclusion

This research investigates the wicked problem of sustainable business growth. In basic terms the problem is how to deliver persistent growth, given its strategic and operational complexity? A synthesis of relevant research signals that few companies maintain a growth

trajectory in excess of a decade (Allen & Zook, 2001; Collins, 2001; Kaplan & Foster, 2001; McKinsey, 2023). Nor is a prior track record of successful business growth a predictor of continuing growth (Boston Consulting Group, 2023).

The research aspiration has been to achieve a synthesis of insights derived from theory to inform a conceptual and scalable, prototyped blueprint for business growth. The Guardian vision is to foster an agile business ethos, capable of responding to volatile market conditions, where leaders both enable, and are enabled by, an interdependent culture. Within the proposed 5P model solution, dynamic stability arises from the universal Guardianship ethic. Dynamic growth is enabled by the synchronization of strategy, systems and cultural processes as flywheels of a self-renewing system that prioritizes learning and innovation.

The research highlights how important it is to pay attention to both *pre-merger* cultural integration and *post-merger* business transformation, when progressing a growth strategy of vertical and horizontal expansion. The intentional focus on a Guardian, interdependent culture supports a growth strategy that demands capacity for integration and transformation simultaneously.

In addressing the academic criteria of generalisable research, the intention has been to meet and exceed generalisability demands in offering scalable solutions derived from design thinking methodology. This study distinguishes between a Guardian leadership style based solely on traits. Traits do not scale. Systems and ecosystems do. The proposed 5P model incorporates principled leadership alongside an ecosystem model of organisational design. Case study generalization as *coherent argument* (Cronback, 1975; Lincoln & Guba, 1985) is derived from synthesis of theory, and triangulation of statistical data with case study findings.

The research findings suggest that the twin aims of the research project have been met, namely, to understand how Guardianship might enhance a culture for business growth and to conceptualize, codify and apply a model of Guardianship as a growth prototype

(Martin, 2009). In arriving at this conclusion, a combination of inductive, deductive and abductive reasoning (Shani, Coghlan & Alexander, 2019; Veen, 2021) has been applied in interpreting statistical data and case study findings.

In addressing the wicked problem of sustainable growth, what is presented are the twin prototyped solutions of a 2GE model, addressing operational and performance excellence, alongside a scalable 5P ecosystem model. As the findings demonstrate, the answer to the research inquiry is nuanced, not linear. The counter-intuitive conclusion is that people growth drives business growth. The key finding is that Guardianship enables growth, when strategic, performance, cultural and technological systems are synchronized to deliver operational excellence across an ecosystem.

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