CRITICAL LEADERSHIP COMPETENCIES AND STYLES OF EFFECTIVE

LEADERS OF THE SUSTAINABILITY AGENDA IN BUSINESSES

by

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CRITICAL LEADERSHIP COMPETENCIES AND STYLES OF EFFECTIVE

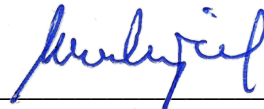LEADERS OF THE SUSTAINABILITY AGENDA IN BUSINESSES

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Dedication

This study is dedicated to my niece who is growing up in a world facing a growing climate crisis

Acknowledgements

ABSTRACT

CRITICAL LEADERSHIP COMPETENCIES AND STYLES OF EFFECTIVE

LEADERS OF THE SUSTAINABILITY AGENDA IN BUSINESSES

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2025

Dissertation Chair: Dr Jaka Vadnjal

Purpose: One of the biggest challenges of our time is that of climate change. While

offering the much-needed goods and services to society, businesses collectively have also

contributed significantly to climate change. Business leaders need to play an active role

in addressing this via a bespoke Sustainability Agenda, a set of actions big or small

depending on the organization's carbon footprint, to get to Net Zero. In a field which is

riddled with complexity, this study is an effort to understand which leadership attributes

enable leaders to be effective in driving the Sustainability Agenda. This research studies

the combination of four critical Leadership Competencies and three Leadership Styles

that leaders need to possess, to drive this agenda successfully.

Methods: This research shortlists the most critical leadership competencies and styles

for leaders driving the Sustainability Agenda. It uses a 25-question survey to ascertain

perceptions of employees in businesses globally on leaders who are perceived to be effective in driving the Sustainability Agenda and their distinguishing attributes. This research also explores the role of Organizational Culture in enabling the leader's effectiveness.

Results: The vast majority of survey respondents perceive that the most effective leaders driving the Sustainability Agenda demonstrate the Transformational Leadership style and/or Transactional Leadership Style combined with the key leadership competencies of Transformational, Ethical, Strategic and Team Leadership. Less than half respondents perceive leaders with the Passive-Avoidant style as effective. 90% of respondents perceive the six dimensions of organisational culture selected to be very important in enabling business leaders' effectiveness in driving the Sustainability Agenda.

Conclusion: With today's challenge of climate change, effective business leadership of the Sustainability Agenda is key. Recruitment and development of business leaders to lead the Sustainability Agenda will bear significant results if it can focus on the combination of four critical Leadership competencies and Transformational and/or Transactional styles of leadership. Furthermore, organisations have to embed certain key aspects of organizational culture to enable leaders to be effective in successfully driving the Sustainability Agenda.

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LIST OF DEFINITIONS

Business Leader: This term 'business leader' is to indicate people in business organizations in roles with formal authority and power over deciding priorities and allocation of resources whether at the organizational or departmental or team level. This definition excludes people in roles that have informal influence but no formal authority over organizational goals and hence the ones in scope are those in senior leadership and typically commercial roles. The definition also excludes sustainability roles other than the senior leadership role such as that of a Chief Sustainability Officer. The assumption is that people in roles such as in Sustainability do not decide the priorities and resource allocation of the organization and that there is a need to hold formal leaders to account and the focus needs to be on formal business leaders with prime accountability of the organization's/ department's sustainability actions.

Leadership of the Sustainability Agenda: This term refers to the leadership of the organization's performance on environmental parameters. For every organization with a carbon footprint, it is the focused leadership needed to reduce the negative impact of the organization's operation on the environment and get it to Net Zero. This is also referred to as 'Sustainability Leadership'.

Leadership styles: Leadership styles are the combinations of beliefs, mindset, attitudes and patterns of behavior that the leader demonstrates. Since mindsets, beliefs and attitudes are not visible, it is the patterns of behavior and actions that become the visible representation of the leader's 'leadership style'. It is the leadership style that people see in everything the leader does from big actions such as how leaders guide the

organization's purpose and priorities to small actions such as how they inspire and motivate their people during the ongoing efforts in the organization.

Organizational culture: This is the collection of beliefs, assumptions, values and norms held by its members. It is expressed in patterns of decisions, actions and interactions. It is captured in artifacts and symbols that stand for the organization and define its identity.

Sustainability: This is defined as 'the quality of causing little or no damage to the environment and therefore the ability to continue for a long time'.

Sustainability Agenda: This is a term this researcher has chosen to use to refer to the sum of all actions a business may need to take to reduce their negative impacts on the environment. In today's reality of a climate crisis, any organization that has any carbon footprint needs to take actions to reduce its carbon footprint to get to Net Zero, the state where the amount of greenhouse gases released into the Earth's atmosphere is equal to the amount removed. The Sustainability Agenda for any organization is therefore the collective set of actions the organization takes for the removal of its emissions and reduction through decarbonization efforts. Since every organization has a carbon footprint, every organization should have an active Sustainability Agenda. For organizations which have a carbon footprint, but which have not defined the Sustainability Agenda, this research assumes the agenda to be dormant. This Agenda is not a standard set of universally agreed actions that every organization must undertake. Rather it is the set of actions that the organization considers the most appropriate for itself given its own context.

Sustainable Leadership: This refers to the set of leadership practices that are intended to enhance the longevity of the leadership, improve its legitimacy and its effectiveness over time. Practices of sustainable leadership may involve working on the culture of the organization and people practices to ensure these are sufficiently flexible and can adapt over time from the organization's purpose and priorities to small actions such as how they inspire and motivate their people to sustainability efforts in the organization.

Organizational culture is the collection of beliefs, assumptions, values and norms held by its members. It is expressed in patterns of decisions, actions and interactions. It is captured in artifacts and symbols that stand for the organization and define its identity.

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CHAPTER I:

INTRODUCTION

1.1 Introduction

1.1.1   Climate Change – the Context.

One of the biggest challenges of our time is that of climate change. Every government has been systematically publishing data that confirms that Climate Change is an impending crisis that threatens human existence, unless we take urgent action and on scale. The need for action on this has never been more pressing. Transitioning to a sustainable future is not just a choice; it is a necessity. Our survival depends on it. And the time to act is quickly reducing. How we respond as humanity will define our future. Our actions or inactions now will have ramifications that will be felt for thousands of years to come.

At the root of the problem of Climate Change is Greenhouse Gas (GHG) emissions. We currently emit around 50 billion tons of greenhouse gases every year (UNEP, 2024). Although this is possibly less than one seventh of the earth's capacity to absorb greenhouse gasses annually, human activities have been adding extra carbon to what is otherwise a balanced system where the earth moves and absorbs 350 billion tons of greenhouse gasses annually (Moseman, 2024). And it is human activity that is adding this extra carbon into the air faster than the planet's sinks can absorb it. Writing in MIT's Climate portal in January 2024, Andrew Moseman along with Daniel Rothman, MIT

professor of geophysics, mention 'human activities have thrown the Earth's carbon cycle out of balance.' This human activity includes burning fuels for energy needed for industry, transport, agriculture, trade and functioning of our society that collectively results in constant increase of greenhouse gas emissions. The CO_2 from human activity emitted over the last century will continue to be in the atmosphere for decades. It could take the earth hundreds of years to absorb the extra CO_2 that started building up since the beginning of the industrial era. In fact, scientists stated that 100% of the global warming since 1950 has been due to humans emissions and activities (IPCC.CH, 2019).

The January 2024 World Economic Forum report warned that 'climate-intensified natural disasters may lead to $12.5 trillion in economic losses and over two billion healthy life-years lost by 2050.' The report went on to highlight that floods would pose the highest risk, causing 8.5 million deaths by 2050. Droughts would cause 3.2 million deaths. Heat waves would take the highest economic toll with $7.1 trillion by 2050 due to the loss in productivity. Excess deaths attributed to air pollution, caused by fine particulate pollution would be the largest contributor to premature death with almost 9 million deaths annually.

The implication of this is not only to be felt in some foreseeable future. It is being felt now. The current levels of GHG emissions are causing unforeseen and continuous increase in overall warming globally, resulting in unliveable levels of sustained warmer temperatures in certain geographies and unprecedented weather conditions in others, impacting millions of people with flooding, droughts, and wildfires. This is not limited only to poor and developing countries. Take the world's biggest economy - in the US,

freezing weather in Texas in February 2021 caused one of the severest energy blackouts of all time till then (NCEI, 2023). This in turn crippled production and supply chains of many goods (Kapadia, 2021). The shutdowns at three major semiconductor plants added to the global shortage of microchips. Climate change has driven up energy bills. In 2021, more than 20% of American adults could not pay their utility bills (Lalljee, 2021). CDP, a nonprofit that runs the world's only independent environmental disclosure system for companies, capital markets and governments, published in its report of 2021 that Greenhouse Gas emissions on average in a company's supply chain (Scope 2 and 3) which is within the direct purview of its suppliers is on average 11.4 times higher than its own operational emissions (Scope 1) and yet 62% of companies globally aren't even engaging their suppliers on the topic of emissions (CDP, 2022). The consequence of inaction of this kind can prove to be very expensive, potentially reducing global GDP by 18% by 2050.

At the root of the Greenhouse Gas problem is the current socio-economic model that celebrates unfettered consumerism. This moves the economic engine which is perpetually pushing more production and in turn more use of raw materials. We currently consume 50% more natural resources yearly than the Earth can replenish. Based on credible estimates, by 2050 if the current levels of consumption and exploitation of the earth's resources continue, humans will need the equivalent of 2.9 earths to survive (Fry and Egel, 2021). This imbalance is accelerating climate change while also accelerating all the other aspects of ecological devastation such as excess deforestation, overgrazing, collapse of natural fish ecosystems, etc. The obvious consequence of this devastation is food scarcity for all beings on earth, collapse of self-sustaining habits and the rapid

extinction of species. We need to act in our own self-interest if we have to exist on earth. We need to act on "environmental sustainability" by the ensuring emissions and wastes do not exceed the earth's assimilative capacities, or extract upto the regenerative capacities of renewable resources and ensure the extraction of non-renewables is at the rate of availability of renewable substitutes (Goodland and Daly, 1996).

NASA Scientists have confirmed that 2024 was the warmest year so far in recorded human history i.e. since record keeping began in 1850 (Bardan, 2025). It is also the first year when global warming exceeds 1.5C above pre-industrial levels (Copernicus.eu, 2025). Increasing number of scholars believe that the climate targets limiting the sustained increase in temperature to 1.5 Celsius above pre-industrial level, as was agreed at the Paris Agreement, is certain to be missed. They see selective communication of the scientific evidence and ignoring critical concerns of scientists due to political pressures and economic expediency. They challenge the unrealistic and overly optimistic assumptions many hold and opine that much more aligned, deliberate action is required to put things back on course. While efforts such as the COPs (Conference of the Parties) to the United Nations Framework Convention on Climate Change (UNFCCC) have been trying to get global alignment on the urgency of action, the progress has been questionable (sarahc, 2024). A more optimistic view would be that some progress is being made on this long journey. For example, UNFCCC's assessment of COP29 is that the progress made on country-to-country trading and making a carbon crediting mechanism fully operational is a significant achievement and has come after a decade of work. On the whole, progress on climate action has been slow and the contribution of sectors including

Business has been limited to say the least. This does not augur well as public opinion is one of disenchantment with governments and businesses.

1.1.2 Global Public Opinion

The most recent, global and largest public opinion poll on climate change, Peoples' Climate Vote 2024, highlighted that people around the globe were feeling the impact of climate change 'in increasingly disruptive ways.' This poll which represents the opinions of 87 percent of the world's population suggested that more than half the world's population (56%) worried about climate change regularly. More than two out of five people (43 percent) felt that extreme weather events were worse this year than last. Almost two thirds (63 percent) were taking climate change impacts into consideration when making decisions on places to live or work and on purchase decisions (UNDP, 2024).

89% people expressed their expectation of greater action on climate in their respective countries. Almost 80% people wanted climate justice and that rich countries should help poorer countries much more, so that climate change and its impact can be managed better.

Most agreed that it is no longer an option for us to carry on with business-as-usual. 61% of people expected big businesses to do more in addressing climate change. 72% people would like to see a rapid transition to renewable sources of energy moving away from fossil fuels. Interestingly, most respondents even in the countries which are the

world's biggest producers of fossil fuels, supported a quick transition away from coal, oil and gas.

Business as a sector of the economy itself contributes over 24%, about a fourth of all the GHG emissions annually. Businesses need to play an active part in reducing its carbon footprint. This research has chosen the term 'Sustainability Agenda' to mean the collective set of actions a business may need to take to reduce their negative impacts on the environment and to get to Net Zero (Ritchie, Rosado and Roser, 2023)

Decarbonization and the energy transition, even if it has to be led by governments, is not a topic that only governments have a role in. Businesses need to be actively engaged in this transition. While businesses in different industries are taking actions of different magnitude and scope, there is a need for a far greater extent of concerted action by the business community and with a far greater sense of urgency than is seen today. This is the starting point of this study which tries to understand how a key driver of change, the element of Leadership, needs to effectively drive this transition in businesses.

The challenge for leaders in businesses is manifold. There is need for urgent demonstrable action and results. Stakeholders including consumers and governments are expecting tangible progress. Yet, making progress on this topic is fraught with challenges coming from the need to reconcile conflicting interests, straddle uncomfortable dilemmas and maintain relationships with people holding opposing perspectives. It is not easy at all to find the balance among simultaneous demands for economically, environmentally and

socially sustainable solutions, especially since many of these demands pull in opposite directions.

1.2 Research Problem

The research problem this researcher worked on is 'what leadership styles and competencies enables the business leader to be most effective in addressing the environmental sustainability challenge'.

To answer the research question, the following aspects needed to be understood first:

1. The urgency of the Sustainability Agenda in business today

2. The role of business leaders in the Sustainability Agenda

3. Measurement of business leaders' effectiveness in this challenge

4. Role of Leadership competencies and Leadership styles in the effectiveness of the business leader driving the Sustainability Agenda

5. Organizational factors that help or hinder competent leaders in effectively deploying their leadership style

To ensure that this research is of value at the practical level, this research tried to first take a practitioner-led view in framing the research problem and clarify associated questions that have a practical value. In doing this, the researcher tried to bring in his observations of three decades of working, to ensure that the problem statement and the subsequent questions are answered with a healthy balance of practitioner insights for this research to be meaningful at a practical level. With this in mind, the researcher presents here the practice-led perspectives on questions 1 to 5 above. These will be further validated with previous research in the section on literature review.

1.2.1 The urgency of the Sustainability Agenda in business today

Climate Change and the role of Business

Climate change is one of the most important and urgent challenges of our time. While every part of society needs to take actions to address this challenge, businesses have to play a more significant role. Businesses consume the biggest share of the earth's resources directly and indirectly and contribute the most to pollution and waste. Also, businesses need to take an active role because businesses depend on the ecology for raw materials and on dependable environmental conditions for stable markets and customers, so their futures depend on it (World Economic Forum, 2025).

With every passing day, the need for actions to address this challenge assumes greater urgency. The rise in temperatures globally is being experienced by humanity the world over. Each passing year has been exceeding records of the highest temperature sustained over the previous years. Commitments made by countries to retain temperature rise to below 1.5 degrees centigrade above pre-industrial levels have been broken. The key contributor to climate change is Greenhouse Gasses (GHG), hence the limiting of GHG Emissions is a key measure for environmental sustainability. GHG Emissions set a new record of 57.1 Giga Tons in 2023, a 1.3 per cent increase from 2022 levels (UNEP, 2024). To put this in historical perspective, atmospheric carbon dioxide and methane concentrations were higher in 2024 than at any time in at least 2,000,000 years and 800,000 years respectively (Copernicus.eu, 2025).The energy use in Business as a sector has been over 24%, i.e., about a fourth of all the emissions. Transport contributed over

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16%, energy use in building around 17.5%, agriculture forestry and land use another 18.4% (Ritchie, Rosado and Roser, 2023).

While businesses do need to prioritise action on climate change, everyone would agree that it is not the responsibility of business alone to address this challenge since business is but one part of the modern economic model which is largely capitalist, encouraging consumerism and industrialisation. We currently consume 50% more natural resources yearly than the Earth can replenish. By 2050, we will need 2.9 planets to survive if we continue to consume at the current rate and do business as usual (Fry and Egel, 2021). This is not obviously sustainable, and humanity as a whole needs to take responsibility collectively to address this as a priority.

This research focuses specifically on the role of business. The term 'Sustainability Agenda' has been chosen by this researcher to mean the collective set of actions a business may need to take to reduce their negative impacts on the environment. Any business that has any carbon footprint needs to take actions to reduce its carbon footprint to get to Net Zero. The Sustainability Agenda for any business is therefore the plans and implementation efforts the business makes for the removal of its GHG emissions and reduction of its carbon footprint through decarbonization efforts. Since every business has a carbon footprint, this researcher believes that every business should have a Sustainability Agenda. If it is being worked on, the agenda is active. For organizations which have a carbon footprint, but which have not defined the Sustainability Agenda in terms of what would like to do nor taken any action, this research assumes the agenda to be dormant.

This researcher believes every organization needs an active Sustainability Agenda, a bespoke agenda to enable it to get to Net Zero

The Sustainability Agenda if actively worked by businesses, along with committed governmental and societal action, can bring humanity back from the brink of an impending climate catastrophe. Given that businesses need the planet to survive if it has to remain in business, it is not difficult to see why it is in the interest of businesses to make the Sustainability Agenda a priority in businesses today.

1.2.2 The role of business leaders in the Sustainability Agenda

Business leaders define the purpose and priorities of their businesses and direct how resources are deployed to these priorities. The Sustainability Agenda is no exception. If environmental sustainability has to be addressed, the only way it can be done is by business leaders making it a priority. The role of business leaders is key in making environmental sustainability a part of the Purpose of the organization, a part of its Vision and Mission. It is only if this is done that the rest of the organization will take meaningful actions to reduce the negative impact of their operations on the environment. It is only when the leaders of the business demonstrate by allocating resources to this priority that employees will go about working on the priority and making things happen.

Many businesses have been building up their Sustainability Teams. These may be headed by the Sustainability Officer. The role of this officer and his team is to operationalize the priority set by the business leader. Sustainability teams cannot make sustainability a priority of the business. That authority and responsibility lies with the

business leaders. Finally, only the priorities set by the business leaders will have any real urgency and traction. At a time when there is no dearth of evidence of the need for the Sustainability Agenda across all businesses, the extent of plans and actions being delivered is dismal. Business leaders have not been prioritizing this agenda over others, leaving sustainability teams to do the best they can in working within their remit. Rather than focus on the Sustainability officer or the Sustainability team, this research therefore focuses on the role of the business leader in driving the Sustainability Agenda.

The abdication of responsibility by business leaders to a Sustainability department or teams that have been tasked to ensure the organization meets the statutory requirements while putting out flowery narratives in their Investor Relations and Public Relations pieces have led to a lot of talk and very little substantive action. Justin Worland, writing for the TIME CO2 Leadership Report newsletter in September 2024, mentioned "The public narrative around private sector climate action is one of deep scepticism. Many advocates have decried it as greenwashing, claiming that companies are using climate goals as a branding exercise. Many companies have pulled back their commitments, saying they no longer feel they are feasible." The lack of true commitment by business leadership can create disenchantment among stakeholders and steadily erode the credibility of the leader's ability to lead. As is evident from global opinion polls or local dialogues, society is looking for real leadership on climate related issues and leaders' effectiveness will be measured in terms of their ability to actually deliver the goods. Leaders who make empty promises or try to deflect attention through posturing will be caught out. Only those who

deliver what they commit and commit to doing what is needed will be deemed effective leaders in businesses.

1.2.3 Measurement of business leaders' effectiveness in this challenge

The Sustainability Agenda is the bespoke agenda for every organization to reduce its negative impact on the environment. The Sustainability Agenda is not a standard set of universally agreed actions that every organization must undertake, hence there is no universal measure that defines effectiveness of the agenda. In the context of climate change, the ultimate measure of effectiveness of its Sustainability Agenda is in terms of its progress towards Net Zero. This agenda when designed and delivered well can take the ultimate goal of Net Zero, translate the goal into meaningful milestones and measure effectiveness of the leaders in terms of progress vs the milestones and Net Zero.

Effective leadership is key to employee retention, customer satisfaction and improved productivity (Landry, 2018). Leader's effectiveness galvanizes followership and delivery of the organization's mission and vision. For leaders to be effective in delivering the Sustainability Agenda with and through their followers, leaders need to be competent and have aligned values, beliefs, attitudes and patterns of behaviours that demonstrate their commitment. Since values, beliefs and attitudes are invisible and since leadership behaviours and actions are subjective, measuring leaders' effectiveness can be both tricky and subjective if left unqualified and not defined against any standard set. To reduce subjectivity of assessing attitudes, values, behaviours, researchers of behavioral sciences have historically used standardized constructs, frameworks and instruments for

assessment. This research will use defined Leadership Competencies and Leadership Styles in combination to offer a more tangible set of measures to articulate more concretely the method of assessing effectiveness. Translating these effectiveness measures to the research problem, this research thereby will try to address the question of what leadership style and key competencies business leaders seem to be demonstrating when seen by stakeholders to be effective in delivering the Sustainability Agenda.

1.2.4 Role of Leadership competencies and Leadership styles in the effectiveness of the business leader driving the Sustainability Agenda

Leadership is central and core to progressing the Sustainability Agenda. For leaders to be effective in driving the agenda, leaders must have the critical leadership competencies needed to define the agenda, use the agenda to drive the transformation needed to deliver the goods, communicate it powerfully and clearly to the teams, uphold the integrity of the agenda and enable others to contribute to this complex challenge. Leaders from the senior-most to the junior-most need to have the right leadership competencies to be able to make the right decisions and to execute them the right way. Leadership competencies provide the foundational element for any leader to lead effectively.

Leadership competencies though critical, may not be enough in getting the followership needed to take forward the sustainability challenge. The leader's mindset and attitudes rather than the competencies will define the leader's conviction and commitment to the cause. This is where Leadership style comes in. Leadership style, which is the

combination of mindset, attitudes and behavioral patterns is what employees observe and take cues from. It is the leadership style that gives away the leader's own commitment to the cause. In the context of the sustainability challenge in particular, where the challenge requires employees to not just do what is needed, but go beyond, to do what is challenging, the leader's ability and willingness to engage their teams plays a critical role. Leaders can only be effective in the Sustainability Agenda if they can galvanize their people to follow and take difficult actions. To address the sustainability challenge, leaders in organizations will need to bring their people along. This is where their leadership style will either help or hinder them from getting the followership they need. It is the leadership style that can make the difference between success and failure of an otherwise competent leader.

1.2.5 Organizational factors that help or hinder competent leaders in effectively deploying their leadership style

As any practitioner will have observed, even the most competent leaders fail. Equally leaders with the most appropriate leadership style may also not be effective in making lasting change. The reasons for these can be many, some being external factors such as market forces and others being internal like the organization's own context and the organizational culture. This research will explore the impact of organizational culture and context to understand how competent leaders can be effective when deploying their leadership styles.

1.3 Purpose of Research

1.3.1 End Objectives. The ultimate purpose of this research is threefold:

1.   To know what behavioral evidence to look for when selecting business leaders who are expected to lead the Sustainability Agenda in organizations.

2.   To know what to coach emerging leaders on, so that they can be effective in leading the sustainability challenge.

3.   To know what organizational or external factors may be important to acknowledge when assessing the effectiveness of business leaders in the area of sustainability leadership.

1.3.2   Research goals. To achieve the ultimate objectives of the research as outlined above, this researcher defines the objectives of the research phase as follows:

1.   Completing a robust review of the literature of leadership theories from the original ones to the current ones, to understand important conceptual frameworks of leadership and what aspects have defined leadership effectiveness over time.

2.   Delve into the literature to understand what aspects of leadership effectiveness are particularly relevant for the Sustainability Agenda

3.   Develop a practical framework that combines the critical Leadership competencies with the most appropriate leadership styles to define effectiveness in leading the Sustainability Agenda.

4.   Understand the role of organization culture in enabling the business leader in this challenge

5.   Understand any other important contextual factors that may impact effectiveness of leaders driving the Sustainability Agenda

Significance of the Study

This study assumes significance for the following reasons:

1. The Sustainability Agenda is a topic of critical significance today and this study puts the spotlight on the Business Leaders' responsibility. Leaders of businesses shape the purpose, vision, strategies, and priorities of any organization. As stakeholders of businesses are increasingly expecting businesses to deliver on the Triple Bottomline, Profits, People, and Planet, the challenge falls on the leaders of business to lead their organization in delivering on this. In a world of ever-increasing complexity, leaders of business are facing several daunting challenges from multiple fronts – financial, technological, people and regulatory – to name a few. Increasingly the challenge of environmental sustainability is becoming yet another big challenge that most business leaders are facing. Even though the complexity of the challenge is many times more for leaders in organizations where the current carbon footprint is significant, it is not insignicant for others either. Ultimately to get to a net zero reality will involve a big change in the ways of working for every busi"ess.'It Is such a pervasive challenge that leadership authors have referred to the leadership of sustainability as the very evolution of leadership ability, (Metcalf and Benn, 2013) underscoring the importance of this topic in today's times.

2. This study goes to the heart of the issue that the Sustainability challenge in businesses is first and foremost a leadership challenge and hence it is important

to distil the critical components that can define the most effective leadership. Leader's effectiveness matters. What defines leadership effectiveness in business today is the ability of leaders to address multiple challenges at the same time and not drop the ball on any challenge. Leaders are measured on their ability to demonstrate that they can add value to multiple stakeholders simultaneously. Their dexterity to appropriately deliver to the demands of the varied context they are in determines their effectiveness. The Sustainability Agenda, which is the set of actions big or small that an organization needs to take to get to Net Zero, is a complex agenda with multiple simultaneous challenges, multiple stakeholders and multiple contexts. Leadership of this agenda demands that leaders be effective across these different dimensions of complexity.

3. This study delves into the critical Leadership Competencies in the context of the Sustainability Challenge. The Sustainability challenge is a complex challenge which requires collaboration of governments, organizations, people. There are multiple functional or technical aspects involved that need to be managed in getting this challenge addressed. In addition, there is need for leadership competencies to ensure that the many technical and functional contributors are set up successfully collaborate to achieve the objectives of sustainability. This researcher believes that the Sustainability Agenda is essentially a leadership challenge, and the significance of this research is in the

focus it puts on the leadership competencies rather than the many functional competencies relevant for this agenda.

4. This study tries to understand the style of leadership most effective for the Sustainability Agenda, a subject that has not been researched sufficiently. It is worth pondering on why Leadership style matters. The leader who believes that the environmental resources are finite and that businesses have to play an active part in restoring the balance will likely display the attitude of doing what is possible about the Sustainability Agenda and is likely to be effective in this, as the belief and attitude align with the agenda. It is this aligned set of beliefs, attitudes and patterns of behaviour that make the Leadership Style, that this research will focus on.

5. This study explores the combined impact of the critical leadership competencies and the key Leadership styles in the context of the Sustainability Agenda to define leadership effectiveness, a perspective that has not been used before and that has significant practical implications. It is important to understand why both Leadership competencies and Leadership styles matter rather than either of these. Many business leaders with all the leadership competencies have not been successful in leading this agenda. Employees can see through their façade of good leadership the lack of real belief in the mission. Employees can detect in their attitude the lack of sincerity. Hence, having the leadership competencies is not enough for a leader to be effective in driving the Sustainability Agenda. A leader can only be effective when their

key leadership competencies align with their mindsets, beliefs, attitudes, and pattern of actions. The greater the alignment the more effective they are likely to be. When people see the leader who believes in environmental sustainability actively deploying their leadership competencies of defining the organization's purpose with sustainability at its core, enabling it to set ambitious sustainability goals, prioritising the environmental Sustainability Agenda, and directing efforts in the organization to support the Agenda, they are likely to follow the leader. In the role of leading the sustainability challenge, the leader's competencies and style have to convey an unmistakable commitment and willingness to go the distance the journey demands. An effective leader is therefore likely to be the one who employees believe 'cares, knows and does'.

6. This study measures observed behaviours over a length of time. If we agree that the fundamental ingredients of effectiveness are the presence of the right mindset, attitude, and skills, it will logically follow that measuring these can provide a good basis of leadership effectiveness. But mindsets and attitudes are extremely difficult, if not impossible, to measure. This research therefore uses observed behaviours as the barometer of the mindset and attitudes. Since there are limitations to how objectively observed behaviours can be translated into a consistent assessment, what is instead used in this study is the perceptions of stakeholders based on their observation of how leaders show up. For these perceptions to be as objective as possible, it is important that they are based on direct observations that have been sustained over a period of time. To collect

the perceptions about leaders and to ensure these perceptions are grounded in observation and based on direct and sustained observations to the extent possible, this survey focuses on the perceptions of employees, since employees 'see' their leaders practically daily and over long periods of time. In summary therefore, this study focuses on perceptions of one of the key stakeholders of business, namely employees. Though perception is potentially a less objective measure than a financial KPI, the premise of this research is that perceptions of stakeholders based on multiple observations of leadership actions over a protracted period, are likely to be reasonably robust and well calibrated. In capturing this experiential view developed over a long period, this research is akin to a longitudinal study rather than a snapshot review of the effectiveness of leadership based on the short-term results, financial statements, or organizational announcements that can change quarter by quarter.

This research tries to ascertain the critical leadership competencies and the most effective style of leadership for businesses which need to deliver on their environmental sustainability actions. Critical competencies define the 'What' since these competencies outline the core expectations of the leader's job. Leadership Styles define the 'How'. Building on existing research on the topic of Leadership Styles and Leadership Competencies, the question this research tries to understand is what the most critical leadership competencies are and how they are demonstrated through patterns of actions that reflect the combination of mindsets, beliefs and attitudes of leaders driving forward the environmental Sustainability Agenda in business.

1.5 Research Purpose and Questions

Building on what has been mentioned above, the research purpose and questions were focused on:

1. The role of business leaders in driving the Sustainability Agenda – this involved recognizing that sustainability means many things in many contexts and defining the 'Sustainability Agenda' for the purpose of this research to mean the work that organizations need to do to reduce the impact their operations have on environmental sustainability in particular. This also involved understanding the impact businesses have on the environment and the role business leaders have to play if they have to take responsibility for their impact and effectively address this challenge.

2. Leadership effectiveness for the Sustainability Agenda – this involved understanding how leadership theory had defined leaders' objectives over the years and how the definitions of leadership effectiveness had evolved over the years. This was important to understand the role of the context and establish what leadership effectiveness means in the context of the Sustainability Agenda in businesses

3. Establishing the critical Leadership competencies needed for business leaders to be effective in driving the Sustainability Agenda. To be effective, leaders need to have the critical leadership competencies required for the specific challenge. Through a study of previous research findings supplemented with the researcher's own practitioner knowledge, the most critical leadership competencies needed for driving the sustainability challenge effectively were selected. Of the many possible

competencies, 4 critical leadership competencies were selected as the basis of the

research exploration and data collection.

4. Exploring what leadership styles were seen to be most effective in driving the

    Sustainability Agenda – as this was the core of the research, the focus of the research

    data collection was on exploring perceptions of participants on what they considered

    effective leadership as demonstrated through their behaviours. Since behaviours are

    what people see, leadership attitudes and mindsets were interpreted in terms of

    observed behaviours. In order to limit the selection of behaviours to a manageable few,

    the lens of critical competencies was used. This meant selecting behaviours that

    aligned with the 4 critical competencies selected. Furthermore, to build on existing

    research, the most well researched leadership theory on leadership styles – Bass and

    Avolio's Full Range of Leadership Theory – the 3 prominent styles of leadership were

    used as the options to consider. This meant that participants had the choice of selecting

    between one of the 3 leadership styles on every 4 critical leadership competencies as

    demonstrated through behaviours. The questions were to understand perceptions of

    leadership effectiveness and were anchored on what participants had observed

    effective leaders doing.

5. Exploring the role of key aspects of organizational culture that has an impact on the

    effectiveness of leaders in leading the Sustainability Agenda. Since leadership does

    not occur in a vacuum, the importance of organizational culture was acknowledged as

    an important facet to be explored. This was done through a selection of the most

    important dimensions of organizational culture that business leaders with some

responsibility of driving the Sustainability Agenda were likely to encounter. 6 relevant archetypes of organizational culture were selected for the purpose of this research.

The research questions were designed in line with the above and keeping the industry lens on leadership competencies and styles such that behaviours and actions were practical and real as opposed to being theoretical or academic or being shrouded in jargon.

CHAPTER II:

REVIEW OF LITERATURE

2.1 Theoretical Frameworks Reviewed

The topic of Leadership of the Sustainability Agenda is a vast and complex subject. Several aspects are interwoven and this researcher had to review the literature of multiple related theoretical aspects to understand what has already been researched and what these studies ascertained. This Literature Review included the literature on the following key theoretical frameworks:

On A. Literature on the criticality of the Sustainability Agenda and the role of businesses.

To ensure a thorough understanding of the criticality of the Sustainability Agenda and the role of businesses, the following aspects were explored:

A.1 Urgency of the Climate Change agenda

A.2 Criticality of the role of Business in this

A.3 Response of businesses to this sustainability challenge

On B. Literature on the critical role of Leadership in addressing the sustainability challenge and a study of Leadership Theories and their evolution.

This was followed by Literature on Leadership Competencies and Leadership Styles for effectively leading the Sustainability Agenda.

A. Literature on the criticality of the Sustainability Agenda and the role of businesses.

A.1 Urgency of the Climate Change agenda

The Intergovernmental Panel on Climate Change (IPCC), the UN body has been calling Climate Change an impending crisis that threatens human existence unless we take urgent action on scale. IPCC, which is the most well-acknowledged and well-represented global body in this field with 195 member states has been assessing the science related to climate change and providing political leaders with periodic scientific assessments concerning climate change, its implications, and risks, as well as adaptation and mitigation strategies. In its AR6 Synthesis Report 'Climate Change 2023', the IPCC highlighted how changes to the ocean, the atmosphere, the biosphere, and the cryosphere have been seeing rapid and widespread changes leading to significant negative impact to nature and people. It states with a high level of confidence that the time to act is quickly reducing. The collective choices we make as humanity and the actions we implement in this decade will shape the course of history with increasing impact being felt from now going to thousands of years (IPCC, 2023).

Greenhouse Gas (GHG) emissions are at the core of this problem. We emit around 50 billion tons of greenhouse gases every year. This comes from burning fuels for energy needed for industry, transport, agriculture, trade and functioning of society. The current levels of GHG emissions have the potential to cause unprecedented and continuous increase in overall warming globally, resulting in unliveable levels of sustained warmer

temperatures, melting glaciers, the rise of sea levels, the change of the patterns of rainfall causing flooding in some parts and droughts and wildfires in others. It can also cause a series of interconnected fallouts of changing weather patterns, threatening life, livelihoods, flora and fauna. Based on the work of scientists in the thousands from all over the globe, IPCC in their Assessment Reports has for decades been making the impact of greenhouse gases abundantly clear. Despite the differences in opinion on the exact extent to which these events are certain and the scale of their fallouts, there is today overwhelming consensus that much of these are not a matter of 'whether' but of 'when.'

Climate change deniers are often heard saying that the earth has enough capacity to absorb the greenhouse gasses and that all the talk of climate action is a mere hoax. Data from several studies confirm this to be simply not based on evidence. Studies which look at the ecological footprint show that amount of productive land required to absorb the tons of carbon dioxide emissions, a process which is called sequestration. Data put out by Global Footprint Network presents the data on how the ecological capacity has started to fall below what may be needed. It shows that the earth does not have enough biocapacity to neutralize all the carbon dioxide being released. The modern economy is taking more than the earth can provide. See Graph 1: Change of Ecological Capacity (1961-2022).
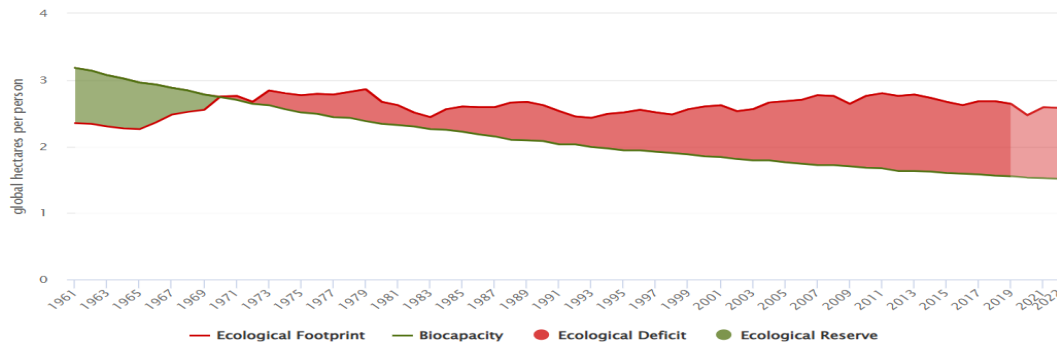
Graph 1: Change of Ecological Capacity (1961-2022); Source: Global Footprint Network

This imbalance is accelerating climate change while also accelerating all the other aspects of ecological devastation such as excess deforestation, overgrazing, collapse of natural fish ecosystems. The only obvious consequence is food scarcity for all beings on earth, collapse of self-sustaining habits and the rapid extinction of species. We need to act in our own self-interest if we have to exist on earth. The carbon footprint globally has grown eleven times since 1961 and is continuing to rise. It is today over 60 percent of the ecological footprint, and the ecological deficit is increasing.

The Paris Agreement was a landmark international agreement which was signed in 2015 by 197 countries. As on date 194 countries including all the big emitters of GHG have both signed and ratified the agreement. The main aim of this agreement is to limit the rise of global temperature to below 2 degrees Celsius above pre-industrial levels and to make all effort to not allow the increase to exceed 1.5 degrees Celsius. As industrial emissions continue, it only increases the scale of the challenge for humanity in limiting global warming to 1.5°C above pre-industrial levels. The World Economic Forum

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published a paper explaining why 2°C of global warming is so much worse than 1.5C detailing the significant, disastrous, and irreversible consequences of increase of global temperature by 2°C (Fleming, 2021).

The article "CO₂ and Greenhouse Gas Emissions" in OurWorldinData.org describes how the global average temperature has risen by over 0.8°C in the post-industrial era between 1961 and 1990 (Ritchie, Rosado and Roser, 2023).Temperatures in 1850 were around 0.4°C cooler than the average between 1961 and 1990. This means the average temperature rise till now is about 1.2°C compared to pre-industrial times. See Graph 2: Average Global Temperature (1850-2024)
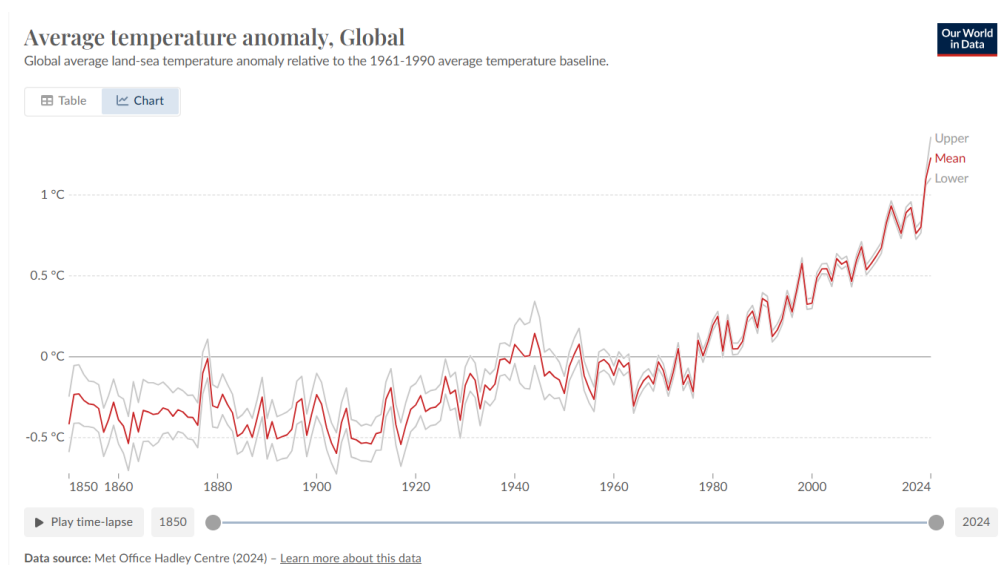
Graph 2: Average Global Temperature (1850-2024); Source: OurWorldinData.org

The last ten years have been the warmest ten years since recording of temperatures globally started in 1850 and 2024 was the hottest year on record. If these record temperatures continue, we will have broken commitments made to retain temperature rise

to below 1.5 degrees centigrade above pre-industrial levels. The World Meteorological

Organization confirms with a 47% probability that average global temperature over the

five years 2024 to 2028 will exceed the 1.5°C threshold (World Meteorological

Organization, 2024). It is obvious to anyone who is aware of the scale and impact of this

increase, that this is an urgent crisis that needs immediate attention globally.

While this is going to affect all of us globally, the annual CO2 emissions from

fossil fuels and industry when seen by country, shows that the contribution is hugely

varied. Graph 3: Global C02 emissions shifts (1750-2022) explained the shifts that have

happened as industrialization picked up from the 1900s.
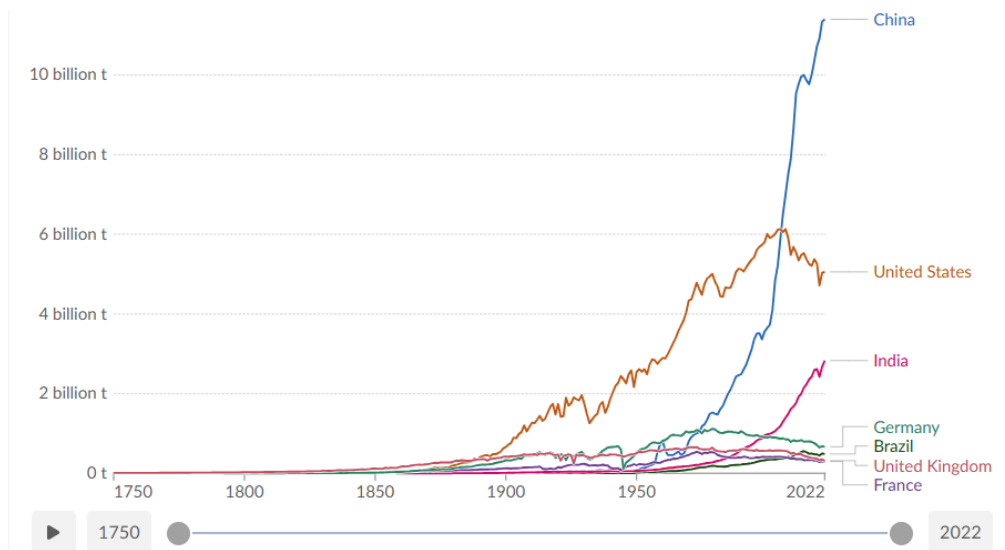
Graph 3: Global C02 emissions shifts (1750-2022); Source: OurWorldinData.org

It is important to mention that though Sustainability is a wide subject and

environmental sustainability linked to climate change is one part of this broader subject.

The United Nations (UN) introduced 17 Sustainable Development Goals (SDGs) in 2015

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to put sustainable development at the heart of policy making. These SDGs were part of the UN's 2030 Agenda for Sustainable Development and had 169 targets and over 230 indicators including those on Climate. The 17 SDGs and their status in 2024 are shown in the infographics below:

Source: United Nations (UN)

Infographic 1: 17 Sustainability Development Goals (SDGs). Source: UN

Infographic 2: Status of SDGs in 2024. Source: SDG Report 2024

If we explore why we are falling so far behind on most SGDs including on Climate Action, we can find several reasons including unrealist goal setting to start with, followed by false hopes on what technology magic bullets we have. In a paper that has not been

peer reviewed, titled 'Bad science and good intentions prevent effective climate action',

(Taylor et al., 2023) the authors argue that the climate targets of 1.5 and 2 degrees Celsius

from the Paris Agreement are certain to be missed but that it is alarming how few experts

are challenging the current assumptions. Pointing to selective communication of the

scientific evidence and assumptions that are unrealistically optimistic, the reality that

greenhouse gas emissions reduction and carbon dioxide removal is being obscured. They

challenge the notion that methods of reduction and removal of GHG can be scaled up to

prevent the many prospective disastrous impacts. A mix of political pressures and

economic expediency leads to critical concerns of scientists being ignored or pre-

emptively dismissed in international negotiations, making the current crisis become a

looming disaster. They conclude that the level of energy and time that will be required to

get climate change right is being grossly underestimated.
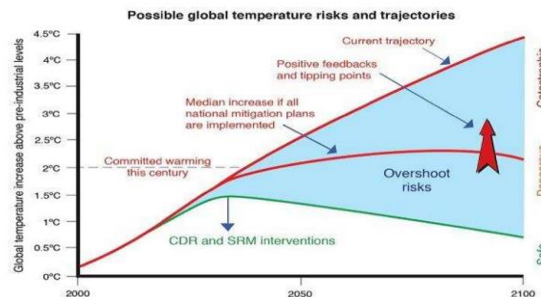
Graph 4: Possible Global Temperature risk trajectories Source: Taylor et al., 2023

Such articles are often classified as alarmist scaremongering by those who take an

optimistic view of the problem. To steer clear of either camp, we need to look at what the

data says. The World Bank, IMF, WHO, OECD, IMF, OECD etc, have been collecting

data to support the monitoring of the SDGs. The data they all have is alarming, especially

on Climate change. GHG emissions have been increasing rapidly over the last three decades. 2022, 2023 and 2024 reports from the US's National Oceanic and Atmospheric Administration (NOAA) that levels of CO2, methane and nitrous oxide in the atmosphere have constantly risen and are expected to continue their high rates of growth.

Whether we agree with these assessments or not, our own experience of heat levels across cities around the world is evidence of the reality. A BBC report by Rannard, Rivault, Tauschinski, in 2023 documented how July 2023 saw the world's average temperature exceeding 17°C for the first time in 120,000 years and that these spikes in the global average temperature are now exceeding Paris Agreement's 1.5°C lower threshold.

These facts highlight the criticality of Climate action and that we need an all-hands-on deck approach. While the scientific community needs to be much more upfront with the evidence they have including where tipping points have been breached, our political leaders need to better balance their optimism to acknowledging the reality of the things as they are, in order to legislate in a responsible way that prevents the ecology from collapsing on itself.

A.2 Criticality of the role of Business in this

The collective emission of greenhouse gases is currently around 50 billion tons every year. Of this the energy use in Business itself contributes over 24%, about a fourth of all the emissions. Transport contributes over 16%, energy use in building around 17.5%, agriculture forestry and land use another 18.4% (Ritchie, Rosado and Roser, 2023). It is not the responsibility of business alone to address this challenge since business

is but one contributor. What is fundamentally responsible for the state of the climate is the modern economic model which is largely capitalist, furiously encouraging and incentivising consumerism. The machine feeding this is industrialisation and urbanisation, which in turn are the drivers of the extent of GHG we see today. We currently consume 50% more natural resources yearly than the Earth can replenish. By 2050, we will need 2.9 planets to survive if we continue to consume at the current rate (Fry and Egel, 2021). This is not obviously sustainable, and we need to collectively address this as a priority.
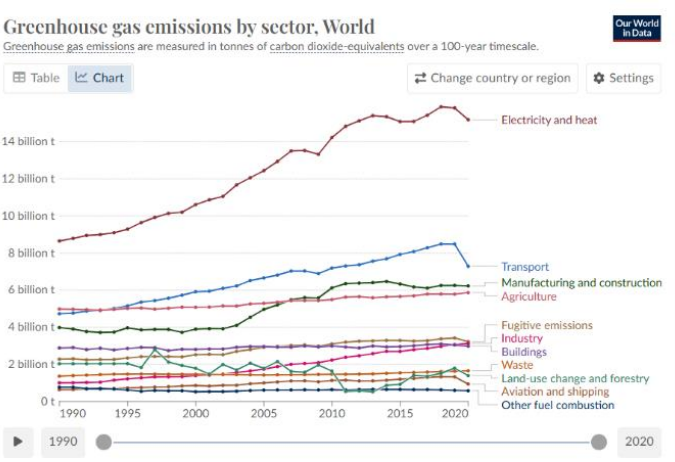
Graph 5: Greenhouse Gas Emissions globally by Sector (1990-2020); Source:

OurWorldinData.org

To better visualize the share of greenhouse gas emissions by different sectors, this pie chart from Our World in Data is very useful. This leaves no room for debate on the contribution by businesses across different sectors to the problem and thereby pointing to the role these businesses need to play in decarbonization.

Global greenhouse gas emissions by sector

This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO_2eq.
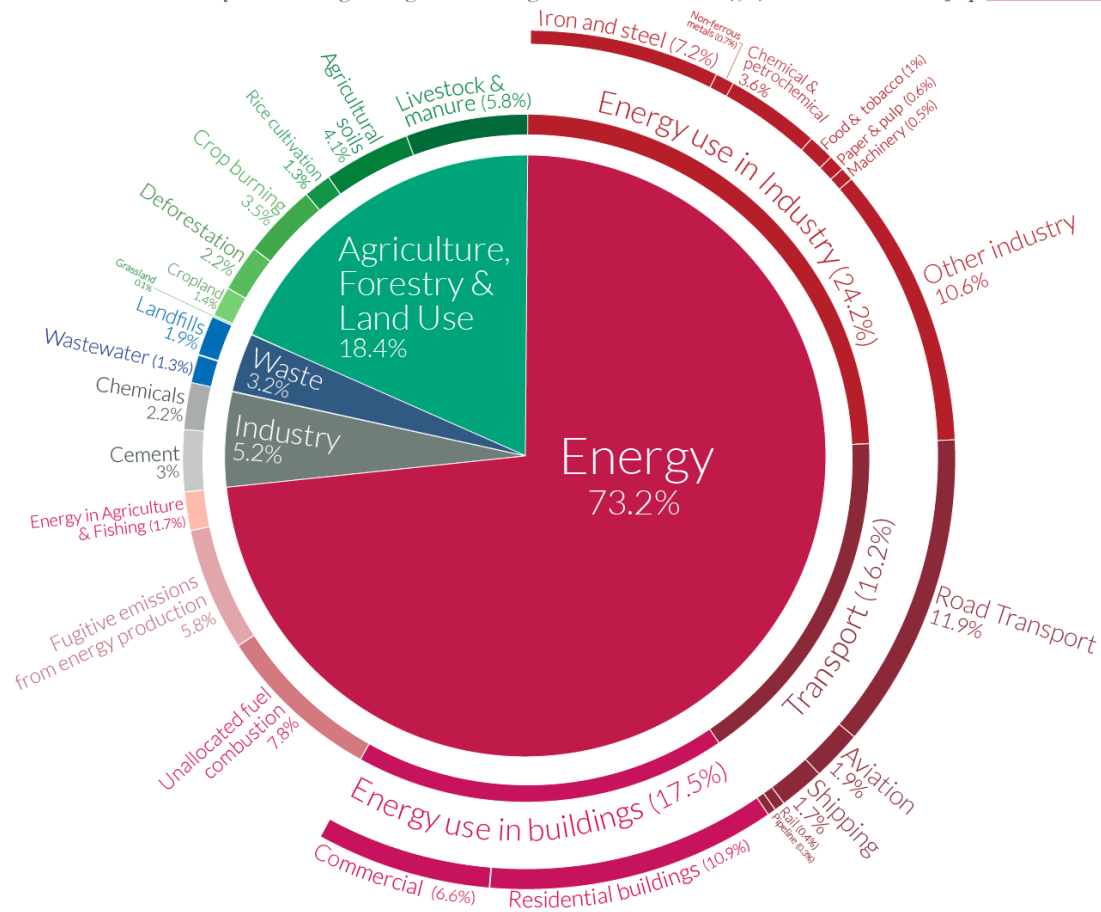
Our World in Data

Graph 6: Greenhouse Gas Emissions globally by Sector details (2016)

Source: OurWorldinData.org

There is no dearth of data to demonstrate which business sectors are the worst offenders. Some industries have been historically known for having substantial carbon footprint because of their reliance on fossil fuels and the extent of their energy consumption on account of their production processes. Based on available data, industries with the biggest carbon footprints include:

1.   **Energy Production Industry**: The first thing that needs to be said is that this energy produced is fundamental for the world to run and the consumption of this energy is across all types of sectors, countries and uses that make living possible. The energy sector emits almost three fourths of the total CO_2 emissions globally. It is widely known that Oil and Gas companies involved in extraction of oil and natural gas and then refining or processing them to turn these into transportable and usable fuel, are the largest contributors to global carbon emissions. This sector includes electricity generation companies which use coal, oil, and natural gas for power generation since power plants burning these fossil fuels emit substantial amounts of CO_2.

2.   **Other Manufacturing and Industry**: It is no surprise that the combined contribution of the different manufacturing and industrial activities not including the energy production industry contributes almost 20% of Global CO_2. The premise of the modern industrial era we live in is consumption and manufacturing is the engine that drives this. The production of steel, cement, chemicals, electronics and the raft of industrial and consumer products requires huge amounts of energy and emits GHG by the tons. For example, converting limestone to clinker is hugely energy intensive and results in cement industry accounting for about 8% of global CO_2 emissions.

3.   **Transportation**: What is possibly less obvious to the common man on the street is that the transportation sector, including cars, trucks, planes, ships, and trains has a huge carbon footprint adding up to over 16% of total CO_2 emissions globally. While electric vehicles are steadily on the rise, this sector till today relies heavily on petroleum-based fuels, which means significant emissions. From the perspective of fossil fuel consumption

per journey, Aviation and Shipping are the biggest consumers since they travel long-distance operations, and no alternatives have yet been commercially scaled to meet the fuel consumption needs.

4. **Agriculture and Forestry**: Not obvious to the common man, even agriculture contributes to emissions of GHG including methane and nitrous oxide. This is because this sector undertakes activities like paddy cultivation and livestock farming, both of which produce methane, deforestation which contributes to CO_2 among other GHG, and the use of synthetic fertilizers which emits nitrous oxide.

5. **Building and Construction**: With increasing urbanization, the need for electrification has continued to rise and houses, streets and workplaces all need lighting all round the clock. Energy required for air-conditioning is continuously growing as many parts of the world experience unprecedented temperatures. In addition, homes in colder climates and winters need heating. There are also emissions during the construction process.

6. **Waste Management**: Managing the waste being generated in all cities and towns from residential, civic and industrial complexes also needs energy and generates further GHG. Methane is produced when the waste in landfills needs to be decomposed. Incinerators can release sizeable quantities of CO_2.

7. **Mining and Quarrying**: Extracting and processing minerals, metals, and fossil fuels is energy-intensive and often results in significant CO_2 emissions.

Given the increasing pace of urbanization and industrialization in developing countries with big populations like India and China, this energy use will continue to accelerate.

The chart below based on the article by Max Roser (2020) "The world's energy problem" published online at OurWorldinData.org. Retrieved from: 'https://ourworldindata.org/worlds-energy-problem' shows the energy consumption and CO2 emissions across countries and helps to highlight that all the energy poor countries are making strides to access and use more energy, which can result in continuous growth of CO2, unless alternative solutions are put in place.
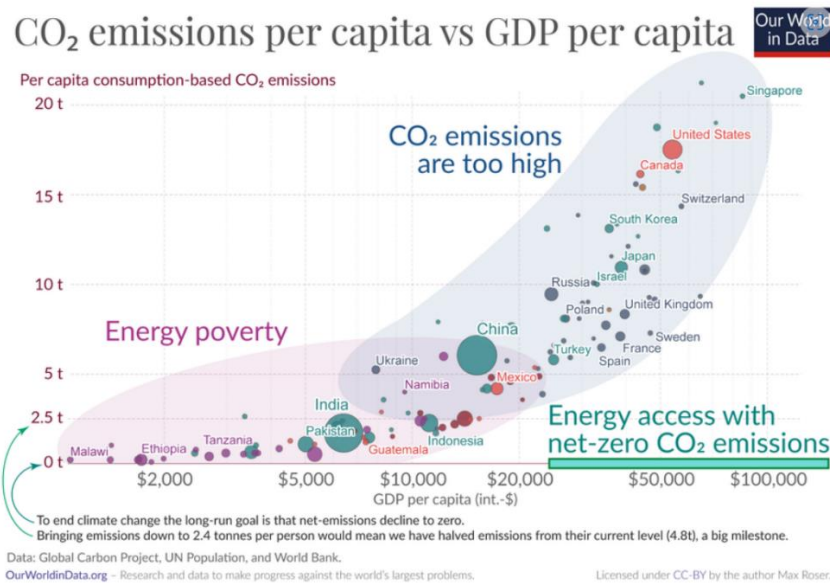
Graph 7: Energy consumption vs GDP per capita and CO2 emissions

Source: OurWorldinData.org

The 2015 Paris Agreement understandably underlined common responsibility and the importance of upholding the nationally determined contributions to control greenhouse

gas emissions. Each nation which signed it, in effect signed up their businesses and civil society to the delivery plan. In fact, as a first, the Paris agreement included commitments of several corporate leaders, city mayors, and governors of provinces. The IPCC has also been clear in its recommendations that these actions need to be led and facilitated by governments and actively delivered by business/industry, a key contributor to the state of affairs.

Businesses need to take an active role also because they have a lot at stake. Businesses depend on the ecology for raw materials and on dependable environmental conditions for stable markets and customers (World Economic Forum, 2025). Hence businesses need to have sustainability as a priority. Dow Jones defines Sustainability in the context of business as "A business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental, and social developments." Corporate sustainability, a term that is also used to describe sustainability considerations in the business context, has been defined by the Doughty Centre in the Sustainability Yearbook 2008 as "a business commitment to sustainable development, and an approach that creates long-term shareholder and societal value by embracing the opportunities and managing the risks associated with economic, environmental and social developments." There are broadly similar definitions from the UN Global Compact, The Conference Board, and others. These emphasize why businesses need to play their part in the Sustainability Agenda. The World Economic Forum's 2023 survey of global risks found that public and private sector leaders believe that the 3

biggest risks in the coming decade are all climate related. In contrast, "geo economic confrontation" (US China relations) comes in ninth (Coulson-Thomas, 2023).

A.3 Response of businesses to this sustainability challenge

Businesses as a collective have been making several efforts to respond to this challenge. These include many organizations and sectors within the big umbrella of business aggressively developing and moving to renewable energy, improving energy efficiency in manufacturing, construction and all production processes, enhancing public transportation and disincentivizing private transport specially in cities, addressing traditional agricultural practices, and deploying better ways of carbon sequestration.

That said, the response of businesses to the sustainability challenge has been varied **a**nd appears to have strong co-relations to the industry segment and geography it is operating in. For example, the renewable energy industry players have been at the forefront of making alternative options available at scale and at ever increasing levels of financial attractiveness. At the other end of the spectrum, are industries like oil and gas, which are reliant on fossil fuels and see the increasing demand for oil and gas as the basis for continuing to run their business models profitably and invest in carbon intensive operations. Also, businesses in some regions are ahead of others. Europe and parts of North America are seen as leading in their climate actions with examples such as the renewables energy space in China seeing a transformation in the last decade.

A few notable examples of actions that businesses have taken on this include:

1. **Adopting Net Zero Targets**: Many multinationals and large companies have set ambitious net zero emission targets. Several have put in place their Sustainability Agenda to know where they stand in their Scope 1, 2 and 3 footprint assessment, targeted reduction of GHG emissions, decarbonization of their operations, and transition to alternative and renewable energy sources. Companies such as Unilever, P&G, Microsoft, Google, Apple, Tesla, General Motors, BP, Shell, Maersk, Singapore Airlines, HSBC and Blackrock, and many others are part of this lot.

2. **Driving Innovation**: Many companies are investing in research and innovative technologies to reduce emissions. Utility companies like Shell, BP, Siemens, Plug Power, JERA are exploring hydrogen and nitrogen options to create clearer fuels. Companies like EDF, Duke, Exelon and Entergy are leaders in the use of nuclear, Shell, Chevron, Exxon, and Total are in the forefront in carbon capture and storage (CCS). electric vehicles, and renewable energy technologies. Companies like Nestle, Gevo, REG and Enviva are innovating in the Biofuels space. Toyota, Hyundai, Bosch are all experimenting with new fuels cell technology options.

3. **Embracing Sustainable Practices**: Several of the companies named above also developed a reputation for having sustainability related practices. These include looking at their energy efficiency, minimizing waste, and developing a value chain that focuses on responsible sourcing keeping several of the SDGs as their operating principles. Notable companies in this include Patagonia, BMW, Nike, Toyota, Orsted, Schnider Electric, GE, Bank of America, among others.

4. **Improving Disclosure and Reporting**: With the trend of greater transparency picking up in climate reporting several of the companies named above are increasing their voluntary disclosures. The Task Force on Climate-related Financial Disclosures (TCFD) and such initiatives are urging companies to disclose companies' self-assessed climate-related risks and opportunities.

Notwithstanding the examples above, the challenge across businesses is multi-fold. A few key reasons for the lack of further progress can be found to be the following:

a. **Short-term Orientation**: The single biggest challenge to climate change action is the short-term orientation of businesses as they look to deliver their quarter-on-quarter returns to shareholders overlooking the elements that can define their long-term success, and the Sustainability Agenda is one such item. This translates to either little or no investments in the sustainability related areas that may be necessary, unless businesses see an immediate financial incentive to decarbonize.

Many small businesses claim they cannot survive if they have to make investments from their small profits. Yet big businesses like Shell and BP which have been making billions of profits claim they need to improve shareholder returns to increase funds. In his article in Financial Times in June 2024, Tom Wilson mentioned how in 2023 BP confirmed that 'the pace of its earlier declared reduction of Oil & Gas production would be reduced. By March 2024, Shell reduced its climate targets to keep growing its Gas production. ExxonMobil sued an activist who had been demanding greater climate action from them'. The profits in Oil and Gas following the Ukraine war have been too tempting to ignore. Among the energy majors, only Total has remained largely consistent. While

each of these players see the need for more gas in particular over the years to come, their about turn on commitments while still keeping the façade of acting on climate change is a new risk where rhetoric exceeds results (Bousso, 2024).

b.   **Lack of Prioritization**: According to the 2022 Global Climate Change Report from UK NGO Cabon Disclosure Project (CDP), over 70% of companies assessed did not prioritize this and did not have sufficient plans and strategies to manage climate risks. Over 50% of companies had not set any targets to reduce their greenhouse gas emissions. This could be because of seeing no financial upsides in the immediate to medium term or having no regulatory pressure or not seeing this as their responsibility (CDP, 2022).

c.   **Greenwashing**: The number of instances where companies are saying more than they are doing is on the rise. Notable examples of companies making misleading claims about their environmental efforts include ExxonMobil, Volkswagen, H&M, Zara: Nestlé and BP (Robinson, 2022). There are many smaller examples of companies stretching the truth to appear to be doing more than they are. This undermines the genuine efforts of others and leads to erosion of public trust in companies as a whole.

The 2015 HBR article 'Making the Business Case for Environmental Sustainability', (Henderson, 2015) made a compelling case for why businesses must put sustainability at the core of their business strategy. Natural resources are finite. Disposing of waste from a variety of commercial processes has a significant environmental impact. Businesses have to acknowledge these realities and change their business model, strategy and capabilities for a world where resources are constrained and the waste such as the emissions of greenhouse gases are accounted and paid for.

Other studies too have made the case for sustainability and demonstrated that more companies are aware of the imperative and linking initiatives for environmental sustainability to financial performance (Epstein and Roy, 2003).

The responses required from businesses must be in the form of an environmental Sustainability Agenda by whatever name it may be called such as Climate Action plan, Decarbonization plan, ESG Plan, Net Zero, Climate action, Ecological protection plan, etc. They all focus on related aspects under the overall challenge of Environmental Sustainability. For this research, the researcher uses the term 'Sustainability Agenda' to include all aspects of the Environmental Sustainability actions relevant to the context of businesses. The term 'Sustainability Agenda' refers to the commonly used meaning of sustainability as 'doing business without negatively impacting the environment, community, or society as a whole'. It is a broad definition and includes the sum of all actions a business may need to take to reduce their negative impacts, however these actions may be labelled - Sustainability/ ESG/ Net Zero/ Decarbonization/ HSSE/ Business Improvement, etc. Whether the organization has been actively working on the agenda to ensure no harm or are not even aware of what they need to do, if its business operations have negative impact, that is considered as confirmation that the business has a Sustainability Agenda, active or dormant.

The Sustainability Agenda may include many things including defining the purpose of the organization to understand if it has any responsibility to the environment, the business models to explore linkages if any to environmental sustainability, the strategy to define advantages if any in having a focus on sustainability, and if skills and resources

are required for the organization to be making improvements in its environmental performance. As consumer sentiments globally are moving towards environment consciousness, progressive businesses are not stopping at doing no harm. They are going beyond and redefining their purpose by adopting 'a concrete, pro-social goal or objective for the firm that reaches beyond profit maximisation' and seeking to be net positive' (Henderson, 2015). Elkington (1997) in his book, 'Cannibals with Forks: The Triple Bottom Line of 21st Century Business' coined the term 'triple bottom line', or TBL, to refer to the need for businesses to broaden the priorities from profit only to the three P's: 'People, Profits, and Planet.'

It would be difficult to find business leaders today who do not see any need for environmental sustainability. The number of leaders who are building environmental, and/or sustainability elements into their day-to-day business and corporate strategy is growing slowly. In the article published in 2020 in Management today titled 'The Necessary Revolution: How Individuals and Organizations Are Working Together to Create a Sustainable World', Peter Senge, B Smith, N Kruschwitz, J Laur and S Schley highlight many examples of businesses stepping up. Many CEOs have championed the point that going good for the environment can be good business and that many opportunities exist to "do good and do well" at the same time.

But the pace of this shift appears to be woefully inadequate. Despite decades of awareness of the importance of the need for businesses to better balance the 3Ps, the action has been limited. Business leaders need to urgently create new business models that

address the needs of shareholders looking for profitable returns while addressing the needs of other stakeholders including employees' governments, socially conscious citizens, environmental NGOs, and activists. Business Leaders need to establish new ways of doing business successfully such that the triple bottom line is managed (Fry and Egel, 2021).

The climate change crisis the world is facing, needs businesses to actively contribute much more than they are doing now, and stakeholders of business organizations expect their leaders to do a lot more to meet these expectations. Though the views of shareholders were the only voice that organizations paid attention to till now, other stakeholders of businesses are beginning to assert and raise their voice. The other stakeholder groups whose opinions are sought are beginning to be more impactful even to shareholders, as they speak to the organizations' brand and share value, are the employees, regulators, customers, and members of the community. Many studies globally, regionally, in different countries, states, cities, institutions and different groups give us a sense of what stakeholders expect on the Sustainability Agenda from businesses.

B. Literature on the critical role of Leadership in addressing the sustainability challenge and a study of Leadership Theories and their evolution.

In the much celebrated book 'Leading Change toward Sustainability: A Change-Management Guide for Business, Government and Civil Society. Bob Doppelt had highlighted in 2003 how organizations be they big, small, old, or young need to completely change their thinking, practices, policies, and cultures using proven sustainability-based organizational change strategies. Based on years of researching how

the leaders of both private and public organizations that initiated and sustained significant

sustainability programmes, Bob showed how this needed changing organizational culture

and interventions in two key areas: First, in the governance system of the organization.

Second, in Leadership. Bob articulated wonderfully how Leadership must be effective and

have the ability to keep their organization focused on achieving its higher mission while

simultaneously managing numerous, sometimes contradictory, streams of activity.

Doppelt found that, when an organization has an effective governance system and

effective, forward-looking leadership, it can transform its culture and successfully adopt

sustainability-based thinking, values, and actions. He showed through numerous examples

that organizations that lack effective governance systems or good leadership, fail to build

a vibrant culture and despite adopting new technologies, tools, processes were unable to

make breakthrough progress on this journey (Doppelt, 2004).

What he pointed to is that leadership effectiveness in today's businesses will need

to involve keeping their organizations' focus on achieving their higher purpose including

aspects such as net zero goals, while simultaneously managing numerous transactional

activities and the varied and often contradictory demands of stakeholders.

2.2 Leadership Theories

The study on Leadership Theories was done to understand the theoretical

underpinnings of leadership effectiveness models and how Leadership has evolved over

generations. The objective was to glean insights into what it has to offer for us to define

effectiveness of leadership in the context of the Sustainability Agenda. A few general observations may be made at this stage based on this study:

a.   Books, articles, and studies have reiterated the importance of good leadership. There are endless lists of attributes, competencies, qualifications, psychological types, personality factors that have been spoken about to define a good leader.

b.   These lists in many cases have several similar if not the same criteria. The context the author or researcher has in mind often defines what criteria they choose to focus on.

c.   Depending on whether the author is looking for personality traits or observable behaviours or something else, the lists emphasize a few criteria over others. Different lists aggregate the qualities or criteria under different headers depending on their perspective.

To understand whether it is the skills or qualifications or personality or other factors that determine the effectiveness of leaders, this researcher studied leadership theories in a chronological order of their publication. Though there are no less than 66 Leadership Theories in modern management and leadership literature, and more are being developed, of these, possibly 22 Theories capture the discreet key concepts of different theories (Mango, 2018).

These 22 theories and key aspects of these theories that resonated with the researcher from the lens of sustainability leadership are mentioned below:

1.   **Great Man Theory (1840s)** - This theory popularized by Scottish writer and philosopher Thomas Carlyle in the 1840s suggests that leaders are born and not made. This theory is inspired by historical figures like Alexander, Julius Caesar, Abraham Lincoln, and Mahatma Gandhi and posits that certain individuals are

born with traits and qualities that make them effective leaders. It believes that leaders are divinely inspired and are wise and moral. Though leadership theory moved on from this belief, the study of traits such as intelligence, charisma, and courage continued and has been studied for the appeal authority figures with certain traits have on followers (Spector, 2016). In the context of the sustainability challenge, the need for leaders to be able to draw in followers due to their traits is something to note.

2. **Trait Theory (1930-1940s)** – Building on the Great Man Theory, the Trait Theory of Leadership was developed by Thomas Carlyn and Francis Galton. This theory believes that leaders share special traits or characteristics and that people with those traits or characteristics become leaders (Stogdill, 1974). Some traits of leaders such as intelligence, determination, sociability, self-confidence and being responsible feel very important in the context of sustainability.

3. **Skills Theory -** In 1955, Katz suggested that Leadership is about the right skills and that Leaders require certain skills in order to be effective in their work (Katz, 1955). The relevance of this theory continues, and all type of leadership roles inevitably think about the leadership skills when appointing leaders, promoting them and moving them on. This is a very relevant theory for sustainability since we need to keep refining the skills that sustainability leaders must have in order to be effective.

4. **Contingency model of Leadership effectiveness** – In his 1964 book, 'A Contingency Model of Leadership Effectiveness', Fred Fiedler suggested that the

effectiveness of a leader is contingent upon how well the leadership style matches

the context and the situation and that there is no one best way to lead an

organization (Fiedler, 1964). The Cognitive resource theory (CRT) developed

by Fred Fiedler and Joe Garcia in 1987 as a reconceptualization of the Fiedler

contingency model, focuses on the influence of the leader's intelligence and

experience on their reaction to stress (Fiedler and Garcia, 1987). The relevance of

this theory for sustainability is that it provides a lens through which leaders may be

able to examine what can go wrong and derail the agenda, so that adequate

mitigation measures can be put in place.

5. **Situational Leadership -** Paul Hersey and Ken Blanchard proposed this theory in

their 1969 book 'Management of Organizational Behaviour: Utilizing Human

Resources' This theory posits that different situations require different kinds of

leadership, and leaders may need to change their style to suit the follower's

competence and maturity. This theory has been a very influential one despite its

critics. Studies have shown that leaders who understand the situation well and

adapt their approach are able to get higher productivity (Hambleton and Gumpert,

1982). The relevance to the Sustainability Agenda is in the fact that leading

sustainability can be very complex with no one answer working in all situations.

The ability of the leader to adapt appropriately can mean the difference between

success and failure.

6. **Psychodynamic leadership -** This theory introduced in 1975 uses concepts from

psychoanalysis, political science, and management theory and posits that the leader

by understanding the personality of the followers can achieve the desired goals and examines the crucial effect that the personality of the leader can have upon the organization and society (Zaleznik and Kets de Vries, 1975). The value of the leader knowing the personality type of followers to be able to address their unique needs and inspire them to action seems relevant for the challenge of the Sustainability Agenda.

7. **Charismatic leadership** – This theory was first formalized as a leadership theory by House in 1976, following the work of Weber, an early sociologist, in the 1940s. This theory which became popular in the 1970s believes that a charismatic leader possesses divinely inspired characteristics with unique power, almost of a transcendent kind (Weber, 1947; House, 1976). The element that feels important in the context of sustainability is that committed followership for a difficult task such as delivering the Sustainability Agenda, comes not out of fear or monetary incentives but out of passionate devotion, enthusiasm and even love for the leader and by extension for what the leader stands for.

8. **Vroom-Yetton-Jago Decision-Making Model of leadership** -This theory posits that leaders should identify the best decision-making style for the situation in consideration of time constraints, quality of the decision and team commitment (Vroom and Jago, 1978).In driving the Sustainability Agenda, leaders will have to give adequate consideration to the situational reality and flex their decision-making style from autocratic to democratic, hence its relevance.

9. **Behavioural Theories (1940-1990s)** -This is not one, but several theories developed over five decades which posit that leaders need to demonstrate certain behaviours to achieve desired goals. One of the theories named Managerial Grid highlights that leaders need to demonstrate their focus on tasks as well as on relationships to get the best results (Blake and Mouton, 1964). The 10 Managerial Roles postulated by Henry Mintzberg in 1990 in his Management Theory is another example of a behavioural leadership theory (Mintzberg, 1990). The essence of these theories, which is that followers see behaviours to judge the presence of the right leadership, is probably the most important point that will apply to Sustainability leaders and leaders in general.

10. **Leader-member exchange -** In their 1975 paper "A Vertical Dyad Linkage Approach to Leadership within Formal Organizations: A Longitudinal Investigation of the Role Making Process," Fred Dansereau, George Graen, and William J. Haga who introduced this theory emphasized the role of strong relationships between the leader and the follower for effectiveness. This model argues that the leader builds strong relationships with their close in-group and empowers them and rewards them. They do the opposite with the out-group (Lunenburg, 2010). The Sustainability leader will face several in and out groups and hence this theory offers some useful insights on the group dynamics needed to be successful.

11. **Servant leadership -** Robert K. Greenleaf is among the first to have captured this idea in 1970 in his essay 'The Servant as Leader'. The premise of this theory is

that leaders need to be in the service of their people and enable them to do what they have been hired to do (Greenleaf, 2007). The relevance of this theory for sustainability leadership is in the fact that in a world where the solutions to sustainability have to be worked out by deep experts in many cases, whether on the technical side or the financing side, leaders have a responsibility to enable them to deploy their expertise.

12. **Path-goal theory** –Robert J. House first introduced this theory in a 1971 paper titled "A Path-Goal Theory of Leader Effectiveness'. This theory advocates alignment of the leader's behaviour, followers' characteristics, and task characteristics. The Leader's behaviour is subject to tasks and followers' characteristics (House and Mitchell, 1974).This theory is relevant to the sustainability since the leader needs to select the right people based on the needs of the role and encourage and inspires the team to work on defined goals through a combination of supportive and participative styles of leadership.

13. **Transactional leadership Theory (1970s) -** This theory by Bernard M. Bass formalised the Transactional Leadership style as a distinct leadership style who expanded on the concept of Transactional Leadership originally articulated by James MacGregor Burns. In his book "Leadership and Performance Beyond Expectations," published in 1985, Bass highlighted exchanges between leaders and followers, where leaders motivate their followers through rewards and punishments based on performance. According to this theory, leadership is a dynamic process of reciprocity between followers and leaders. Transactional

leaders use rewards and punishment to encourage followers to accomplish organizational goals (Burns, 1978). In the context of sustainability this is an extremely relevant theory since it reflects the reality of most organizations and most leaders.

14. **Transformational Leadership -** James MacGregor Burns first introduced this concept in his 1978 book "Leadership." Bernard M. Bass expanded on Burns' work in the 1980s. He developed the theory further and created the Multifactor Leadership Questionnaire (MLQ) to measure Transformational Leadership. The premise of this very popular theory is that the leader motivates followers to perform beyond expectations and to support significant changes in the organization in the interest of a much better way of doing business and a far higher level of productivity (Bass, 1985).This is probably the most relevant theory for the sustainability challenge since businesses have to transform their business model rapidly putting sustainability at the heart of their business strategy, in order to arrest the negative impact of their operations on the environment and to deliver the expectations of its multiple stakeholders.

15. **Strategic Leadership -** This theory has had many contributors over decades. One of the foundational books on this "Top Management Strategy," published in 1984 by Benjamin Tregoe and John Zimmerman defined the role of top management in defining strategy. In their 2013 book "Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards," by Michael A. Hitt, R. Duane Ireland, and Robert E. Hoskisson, the authors laid out the premise that the

leader needs to ensure that the organization competes effectively in the turbulent environment, with an eye on the critical few value drivers for the short and the long term. With this in mind, the leader helps the organization define its strategic direction and the prioritization of different components that enable the strategic plans to be effectively implemented (Cannella, Finkelstein and Hambrick, 2009). This is one of the most relevant theories for the sustainability challenge since businesses have to navigate through multiple challenges simultaneously and deliver value to multiple stakeholders – this needs them to be keep the long term in mind, understand connections among the many patterns and data points, and build strategic plans fusing the many medium and short term demands on the organization.

16. **Upper echelon -** Donald C. Hambrick and Phyllis A. Mason in their 1984 paper titled "Upper Echelons: The Organization as a Reflection of Its Top Managers," proposed that organizations behave the way they do because they take cues from the top executives (upper echelon) and what we see in organizations is as a result of executives' characteristics (Hambrick and Mason, 1984; Carpenter, Geletkancz and Sanders, 2004). In the context of the sustainability challenge, this theory provides a reminder that the Board and C Suite often sets the pace on everything from strategy to culture to the mindset.

17. **Kouzes and Posner's Leadership Challenge theory** – In their 1987 book, 'The Leadership Challenge' James M. Kouzes and Barry Z. Posner introduced this theory which opines that extraordinary things happen in organizations when

leaders carry out five tested leadership practices, namely modelling or showing the way, building a shared vision, challenging the status quo processes, enabling others around to take action, and encouraging people to work from the heart Kouzes and Posner, 1987). The theory highlights some extremely relevant aspects for the sustainability challenge. In fact, all the five practices are critical in delivering the Sustainability Agenda.

18. **Adaptive leadership**: Ronald Heifetz and Marty Linsky who introduced this framework in their 1994 book, 'Leadership Without Easy Answers' emphasized that leaders have to encourage their employees to be resilient and innovative in order to thrive in the changing environments and tackle complex challenges. The leader relentlessly helps followers to solve the adaptive challenges (Heifetz, 2009). The sustainability challenge is an adaptive challenge, and this theory feels very relevant. We are facing an unprecedented crisis of leadership, both because our demands and expectations of leaders are extremely high and the leader's ability to meet them seems limited. In a complex and changing world, there are increasing numbers of adaptive challenges which do not have ready-made solutions.

19. **Team or Collective Leadership Theories -** There are several theories around the importance of collective or distributive leadership. A notable contributor was Peter G. Northouse who spoke of this in his book "Leadership: Theory and Practice," in 1997. The premise of these theories is that leadership is dynamic and can be shared with different people providing leadership at different times (Hill and Bartol, 2016). The evolution in leadership theory has seen the shift in focus from an

individual leader to organizational networks to ensure the achievement of the collective goals (H Al-Ghanem, Braganza and Aldhean, 2020). This theory is extremely relevant for the sustainability challenge in businesses since different experts have to lead the team on different aspects. Besides, when the work is more complex, the benefit of shared leadership is distinctly stronger (Wang, Waldman and Zhang, 2014). Both these points need to be emphasized because of the relevance to the Sustainability Agenda in that a team pursuing the Sustainability Agenda-led business goals will likely see the positive team attitudes benefitting the wider ecosystem as well as positively challenge team members and enhance their growth.

20. **Level-five leadership -** In his book, 'Good to Great: Why Some Companies Make the Leap... and Others Don't' published in 2001, Jim Collins introduced the concept of Level 5 Leadership. This model captures the characteristics common to Level 5 leaders: humility, will, ferocious resolve, and the tendency to give credit to others while assigning blame to themselves (Collins, 2001). If Level 5 leaders are an example of the most successful leaders, the qualities highlighted should be important for leaders driving the Sustainability Agenda too.

21. **Authentic leadership -** Though developed by several authors over a long period of time, Bill George whose 2003 publication, 'Authentic Leadership: Rediscovering the Secrets to Creating Lasting Value' explored the subject in depth, is considered a key contributor. The theory posits that leaders need to be true to their values, genuine and transparent in their dealings. The central premise

of this theory is that through increased self-awareness, self-regulation, and positive

modelling, leaders can be their authentic selves and foster the development of

authenticity in followers contributing to their well-being and performance. (Avolio

and Gardner, 2005). In the context of sustainability, the element of positive role

modelling feels very relevant.

22. **Ethical leadership -** Michael E. Brown, Linda K. Treviño, and David A.

Harrison's "Ethical Leadership: A Social Learning Perspective for Construct

Development and Testing," published in 2005, opined that Ethical leaders think

about long-term consequences, drawbacks and benefits of the decisions they make

in the organization and that they are guided by the right principles (Brown and

Treviño, 2006). A variation of Ethical Leadership has been called Responsible

Leadership. It is about doing the responsible thing and is probably the way to the

future (Pless and Maak, 2012). These theories are extremely relevant in the context

of the sustainability challenge since leaders have to have high standards with

respect to how business needs to be conducted and how it should not have net

negative effects on the environment.

As is obvious from the above, many theories are evolutions from and adaptations

of other theories. For example, although there are some differences, many elements of

Transactional Leadership exist in Transformational Leadership theories (Odumeru and

Obgonna, 2013). Recent research has also shown that constructs proposed by new

leadership models may not be as new or distinct from leadership models like

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Transformational Leadership which have been studied far longer (Banks et al., 2016). For example, leadership models such as ethical leadership (Brown, Treviño and Harrison, 2005), authentic leadership (Avolio and Gardner, 2005), servant leadership (Barbuto and Wheeler, 2006) and Transformational Leadership are highly related empirically and there are considerable overlaps (Hoch et al., 2018).

2.3 Leadership Competencies for Sustainability

Keeping in mind the objective of my research, on what leadership style and key competencies business leaders seem to be demonstrating and if they are seen by stakeholders to be effective in delivering the Sustainability Agenda, this researcher next explored the competencies required for being a transformative leader in the context of the Sustainability Agenda.

Key Definitions: A few key definitions to be used in the research were clarified at this stage.

The operating definition of 'Leadership Competencies' used in the research is that of the 'essential skills and behaviours needed for leaders to effectively lead and translate the organization's members' effort into meaningful results.'.

The definition of the leader also needed to be clarified. Even in the context of sustainability, the term 'leader' can mean different things. The meanings in different research and studies are very varied. Several researchers opine that anyone who takes responsibility for understanding and acting on sustainability challenges qualifies as a

'sustainability leader' (Ferdig, 2007). In the paper 'Sustainability leadership: Conceptual foundations and research landscape', the authors (Henrique, Cristina and Walter Leal Filho, 2023) conducted a bibliometric analysis of 1,813 well-cited papers published in top journals that directly tackle sustainability leadership, provided a definition of sustainability leadership: 'as the person who motivates and includes followers in order to overcome sustainability barriers, addressing challenges, that meet the needs of the present without compromising future generations'.

While these definitions acknowledge both formal and informal leaders, in the context of holding formal leaders to account, this research uses the term to mean formal business leaders who have the prime or shared accountability of the organization's Sustainability Agenda. This definition focuses on those in roles that give them formal authority to decide on the priorities of the organization and allocate resources accordingly. This is not the role of the sustainability teams who need business leaders to determine how they wish to run the organization, whether sustainability is important and how important in the scheme of things. Sustainability teams may act as subject matter experts and execute plans that have been agreed upon.

This research focuses on business leaders with authority over the organization's resources and priorities and hence by extension is more focused on senior business leaders. Most conventional carbon intensive organizations need a culture change to focus on sustainability.

What is particularly true in culture change initiatives is that the actions-or inactions-of a relatively small number of key people at the apex of an organization

including the governing bodies (Boards), the chief executive officers (CEOs) and groups

of executives (top management teams) can dramatically affect organizational outcomes

(Cannella et al., 2009).

2.4 Critical Leadership Competencies for Sustainability.

As discussed in the previous segment on the 22 Leadership theories or group of

theories, each seem to have one or more competencies that are relevant for leading the

Sustainability Agenda. To get a sharp focus on the most critical ones, the researcher

selected four competency groups that appeared to be most critical and relevant. These

meet the 'Must Have' criteria to be considered the Critical Leadership Competencies that

business leaders need to be effective. These competency groups are

(a) Transformational Leadership Theory

(b) Ethical Leadership Theory

(c) Strategic Leadership Theory, and

(d) Team Leadership Theory.

The following segment outlines the specific leadership competencies that these

theories present that are relevant for the Sustainability Agenda.

2.4.1: Relevant competencies from Transformational Leadership:

James MacGregor Burns in his 1978 book, 'Leadership' highlighted

Transformational Leaders go beyond the tit-for-tat transactional relationship, such as

performance-reward linkages, to drive their own interests. Bernard M Bass built on James

MacGregor Burns' ideas of Transformational Leadership and tried to understand how people transcend themselves, how and when they do more than told to. He based on studies of Freud, political scientists, psychologists, historians, motivational and leadership literature and defined the outcome the Transformational Leader engenders from others as "performance beyond expectations." (Bass, 1985).

The literature on Transformational Leadership highlighted the following important aspects of consideration:

1. Effective Transformational leadership goes beyond inspiring a few followers to go beyond to building a culture where everyone is willing to go beyond the transactional, contractual commitment.

2. Tom Peters and Robert Waterman in their book 'In Search of Excellence' highlighted that Organizational Culture constitutes one of the most important success factors in any company trying to achieve long-term success in its business. For the effective delivery of the Sustainability Agenda, which is a long game, the success of the business is a must.

3. The extremely popular McKinsey 7S Framework they built referred to the alignment of strategy, structure, systems, skills, style, and staff around shared values.

4. For organizations embarking on a transformation journey to embed the Sustainable Agenda, ensuring that environmental sustainability is a shared value is key.

5. It requires businesses to put environmental sustainability at the core of its business strategy.

6. It requires businesses to build organizational structures where those leading the Sustainability Agenda have seniority, influence, and empowerment.

7. Businesses need to have systems that are built around these values and structure to enable the delivery of the agenda, not get in the way.

8. And last but not least important is employees having the skills to execute the strategy. It is only by aligning the different elements that the wider impact of a transformational journey can be felt organization-wide and more broadly. (Mokhtar, 2021).

This calls for a number of competencies, including being able to define the organizational vision, having the courage to challenge the status quo, engaging the hearts and minds of employees and bringing others along around the Purpose to build a high-performing system (Vaill, 1982). As a minimum, the competencies involved include firstly the competence of communicating a compelling and clear vision of the future of the organization, secondly moving followers including employees and suppliers to action, the thirdly empowering followers to achieve the vision and the fourth is to lead by example (Bennis and Nanus, 1985).

In order to bring the kind of profound change needed in organizations in terms of managing the Sustainability Agenda, leaders are compelled to make transformative change (Visser and Courtice, 2011). Effective leadership involves inspiring employees to think and work differently, assessing and proactively meeting regulatory requirements, defining new guiding principles of doing business sustainably and responding to opportunities to promote a more sustainable future. To achieve the sustainability goals, leaders must

challenge the status quo, create, and provide meaning, and develop in employees the mindset of being personally invested in achieving sustainability outcomes (Wiesner, Chadee and Best, 2018).

Studies have also shown that Transformative Leadership does have actual impact on organizational performance. Althnayan et al., (2022) researched social learning theory and stakeholder theory and found that environmental Transformational Leadership positively predicts environmental organizational citizenship behavior, leading to improved organizational sustainability performance.

2.4.2: Relevant competencies from Strategic Leadership:

Many businesses are taking measures to integrate the relevant Sustainability Agenda topics into their overall strategy. The increasing concern on climate change has galvanized the more progressive world community and the business leadership to raise the topic of looking at an entire range of environmental and social problems as part of the organization's strategic considerations. The increased attention of the government and the investment community to business projects based on the principles of sustainable development, have made the Sustainability Agenda core to the strategic agenda of companies and leaders can ill afford to deprioritize that. Being strategic enables the leader to be proactive, discern what is most important, focus on the long term and choose the most important issues and topics to work on. Leading the Sustainability Agenda demands all of these abilities of the leader. The competencies required to do justice to the strategic agenda include the competence to make choices of what to deprioritize in order to prioritize the Sustainability Agenda, resource it appropriately in terms of budget and

people, have a clear strategy to deal with the fallout of the shifts, thereby requiring the leader to proactively grow and develop new sustainable areas of work that deliver success (Cannella, Finkelstein and Hambrick, 2009).

Multiple studies have shown that the leader's ability to comprehend and assimilate information from multiple sources and turn it into a strategic plan that addresses the long-term vision, and the more immediate deliverable of the organization is critical for the success of the Sustainability Agenda. Some researchers (Metcalf and Benn, 2013) opine that leadership of the Sustainability Agenda needs leaders to have extraordinarily high strategic capabilities.

These leaders need to discern key issues amidst the complexity, think through complex problems and devise strategic plans. They also need to engage groups to get buy in to these plans and be good in managing the dynamic, adaptive organizational changes as their plans start to get delivered. These leaders also need to have the emotional intelligence to manage their own emotions associated with this complexity. Studies have also shown that the Sustainability Agenda in businesses need to keep economic considerations in mind and integrate the 'triple bottom line' to the definition of the business's success. Outcomes must be designed to be socially and environmentally responsible as well as economically viable. In fact, business leaders are discovering that sustainable business strategies are often the most profitable strategies (Willard, 2002).

2.4.3: Relevant competencies from Ethical Leadership:

Ethical Leadership is ethics is at the heart of leadership and is critical for the success of and long-term survival of any organization (Ciulla, 2006). Ethical leadership

has emerged as an extremely important aspect of effective leadership and specially so after the loss of public trust following highly publicized leadership scandals in businesses (Treviño, Den Nieuwenboer and Kish-Gephart, 2014).

The competencies that Ethical leadership includes are considerate behavior, honesty, trust in the leader, interactional fairness, socialized charismatic leadership, and abusive supervision (Brown, Treviño and Harrison, 2005).The Sustainability Agenda is a topic that demands leaders to stand up for what is ethical and be counted, thereby underlining the need for courage and conviction. Ethical leadership therefore goes far beyond just being compliant with the prevailing law and reporting requirements. The other competencies it invokes are accountability when leaders need to own up to past errors and violations and the competence of setting high standards to ensure that ongoing operations adhere to the highest standards of scrutiny. The leader's role at all levels is to give thoughtful attention to the organization's conduct, else recognize that history will judge it poorly for doing the wrong thing knowingly.

Making progress on the Sustainability Agenda is fraught with challenges coming from the need to reconcile conflicting interests, straddle uncomfortable dilemmas and maintain relationships with people holding opposing perspectives. It is not easy at all to find the balance among simultaneous demands for economically, environmentally and socially sustainable solutions, especially since many of these demands pull in opposite directions. To be able to reconcile among these needs the leader to have a strong personal ethic that reaches beyond self-interest (Ferdig, 2007).

It is the need for this personal ethic that makes it critical for leaders of the

Sustainability Agenda to have this. Aspects such as honesty, trust, and integrity which are

captured in ethical leadership theory (Brown and Treviño, 2006) when embodied in the

leader who reinforces these values through role modelling, rewards and punishments, and

communications, manages to set the organization's moral tone (Mayer et al., 2012).

2.4.4: Relevant competencies from Team or Collective Leadership:

As the demands on organizations have become more complex and changes more

frequent, the importance of team or collective leadership style has grown. The

Sustainability Agenda will require substantive changes in most organizations. It may mean

business process re-engineering (BPR) which will generate a whole series of projects.

These are unlikely to be mere process improvement projects. Many of these projects will

become radical organizational transformation projects and need the whole team to be

involved and to co-lead (Levene and Braganza, 1996). Studies on the distribution between

vertical and horizontal leadership in projects have shown that there is a realization that not

all projects/ work can be led effectively by the top and the need is for distributed

leadership. (Drouin et al., 2018).

The competencies that emerge as key therefore include the ability to delegate

without abdicating responsibility, to recognize the unique strengths of different team

members and allocate responsibility in line with people's strengths and areas of passion,

the competence to build effective communication channels for vertical and horizontal

information sharing and dialogue, the competence to build trust in the team among

stakeholders and within members of the team itself. This enables the leaders to build a

social system in which the employee's social needs are addressed thereby motivating

employees to higher productivity. It includes the competence of empowering the team for

shared decision making and group participation in building productive organizations.

Douglas McGregor, Rosabeth Kanter, Tom Sergiovanni, and Terry Deal highlighted the

centrality of delegation and communication about goals, regular feedback on goal

accomplishment, respect for diversity and a collective effort for quality. In the context of

driving Sustainability effectively in business, Leadership is a responsibility of the many,

not a privilege of the few.

Many studies and researchers have emphasized the importance of ensuring the

leader recognizes that success in the Sustainability Agenda can only come by being

inclusive and collaborating effectively with a wide range of experts, passionate advocates

and those with complementary skills and focus. This will require building a shared vision,

a common purpose, and embedding sustainability values to empower the organization to

make progress on their operational processes keeping the integrated KPIs including

sustainability KPIs as the north star. Team leadership is not just about leading internal

employees. It is also about bringing external partners along both in the development of the

Sustainability Agenda and the delivery of the triple bottom line strategies. This includes

other companies and NGOs. Being a partner of choice and ensuring relationships are built

on trust and mutually rewarding will be key for long term success. (Elkington, 1997)

Shortlisting Competencies: If we were to summarize the competencies from the most

relevant 4 shortlisted theories above, we realize the list is rather long. While this lists the

possible competencies, they are still many competencies rather than the critical few. This researcher takes the view that at a practical level, if everything is equally important, nothing is important. With many competencies being seen as important, the focus needed to drive success may be amiss. This researcher believes that it is easy to list many than name the critical few and that this is particularly true in academic leadership literature. Almost every paper and study and article on leadership highlights a long list. As an example, the Centre for Creative Leadership (CCL)'s April 2024 article 'The Characteristics of a Good Leader', describes a good leader as one who "should have integrity, self-awareness, courage, respect, compassion, and resilience. They should be learning agile and exert their influence while communicating the vision, showing gratitude, and collaborating effectively". The challenge is narrowing down to the more material ones, and this is where knowledge of the context makes a difference. Leadership research has fortunately evolved from a study of general attributes of leaders for every situation to more finetuned studies of leadership in specific domains. This has attracted the interest of talented scholars and practitioners from around the globe who have revolutionized our understanding of the subject (Dinh et al., 2014).The theory has advanced from an understanding of general leadership processes over indeterminate amounts of time to a phenomenon that evolves over different timespans. It has also deepened the understanding of leadership effectiveness based on the hierarchical level of leaders (Kaiser, Hogan and Craig, 2008)

This researcher therefore tried to understand if previous research had established the critical few competencies that matter most in the context of the Sustainability Agenda.

To discern specific leadership competencies that relate to the sustainability challenge, we needed to look at studies on sustainable, sustainability, and environmental leadership from this lens.

Studies on Leadership competencies: The most relevant studies on the subject of leadership competencies related to the Sustainability Agenda are the following:

1.   A study by the Centre for Creative Leadership (CCL) in 2006 surveyed 247 leaders to gauge leader awareness and organizational implementation of the Triple Bottom Line (TBL) concept. found that the three most critical individual leadership competencies necessary for adopting triple bottom line approaches were long-term view, communication, and influence. (Quinn and Baltes, 2007)

2.   A United Nations Global Compact-Russell Reynolds Associates study in 2020 did in-depth interviews and background analysis on a group of 55 sustainability pioneers — Chief Executive Officers (CEO) and board members from across continents and industries on the characteristics of sustainable business leaders. It established that sustainable leaders demonstrate four critical leadership attributes that are driven by their sustainable mindset: 1. Multilevel Systems Thinking 2. Stakeholder Inclusion 3. Disruptive Innovation and 4. Long-Term Activation (Murphy and Kingo, 2020). This study outlined that the agenda requires transformational business leaders who understand the need to look beyond near-term profits and embrace their role as change agents — both within and beyond their firms and broader ecosystems.

3.   The Cambridge Sustainability Leadership Model (Visser and Courtice, 2011), designed based on research conducted by the university and then corroborated by

interviews with few executives and the Cambridge Impact Leadership Model (Hooper, Drake and Begley, 2018) developed with inputs from over 9000 leaders internationally, the report titled 'Rewiring leadership The future we want, the leadership we need' highlighted how leadership expectations had changed and how leadership was not just a little more of the same elements that had made leaders successful thus far.

4.   A study titled 'Behavioural competencies of sustainability leaders: an empirical investigation' (Knight and Paterson, 2018) focused on Behavioural competencies of Sustainability Leaders published in 2018 did a quantitative evaluation of the relative strengths of 5 competency groupings of 36 behavioural competencies and distilled 10 critical Competencies (Developing Expertise, Impressing People, Establishing Rapport, Articulating Information, Interfacing with People, Valuing Individuals, Exploring Possibilities, Generating Ideas, Challenging Ideas and Understanding People) and 10 more Prominent Competencies (Team working, Developing strategies, Conveying self-confidence', Upholding standards, Thinking positively', Making Decisions, Siezing Opportunities, Pursuing Goals, Providing Insights and Empowering Individuals).

Multiple Perspectives: Based on the above extensive literature review of leadership theories from the time modern leadership theories started to be postulated till the most contemporary studies, it was clear that there are several relevant theories and multiple perspectives on effective leadership of the Sustainability Agenda. Also, the more recent studies on leadership competencies needed by those leading the Sustainability Agenda provide sufficient basis to reasonably clearly answer the question: what the key

competencies of business leaders for them are to effectively lead the Sustainability Agenda. While many of the perspectives are complementary, some are not, particularly on aspects such as criticality and value.

While these studies have built on several interconnected leadership behaviours, practices, and skills that achieve sustainability outcomes, a closer examination of the leadership literature reveals a lack of agreement and understanding of the types of leadership attributes necessary for positive sustainability (Boeske, 2023). This is where this researcher chose to not rely on one or two studies but to consolidate from different research findings a set of the most cited competencies to establish the critical few that would be 'must haves' for the subject of the Sustainability Agenda.

2.5 Leadership Style for the Sustainability Agenda

As important as competencies are, a competent leader is not always the most effective leader. Despite the leader's competence, if the leader is unable to effectively get across and persuade the employees to pay heed, the leader may not be effective. Practitioners therefore often look at leadership from one other lens – that of style. A style is the combination of mindsets, assumptions, values, attitudes and behavioral patterns, displayed. The combination gives leadership a form that is visible and experienced by those around. The topic of leadership styles has understandably been one that many practitioners and researchers have explored to explain leader effectiveness. Many of the styles have evolved from leadership theory or models developed and many instruments have been designed to assess the style of leaders. Though the notion of leadership style

has faced criticism (Rost, 1991; Smith and Peterson, 1988), its application in leader selection and leadership development is pervasive. While leadership competencies have been researched in the context of sustainability, there seems to have been little or no study on the most effective leadership style for the Sustainability Agenda. Leadership style in the context of the Sustainability Agenda can be described simply as 'how a leader leads the Sustainability Agenda'. It is the approach a leader takes when setting direction on the Sustainability Agenda, executing plans, and involving the people. Though somewhat related, it is different from what competencies a leader needs, to lead effectively. If competencies are the 'what' (what does the leader need to do), the style is the 'how'. The leader's style reflects the leader's mindset on sustainability and attitudes to work and the people. It is visible through their behaviours and has a significant bearing on how they are perceived and whether they are effective in driving the extremely complex topic of sustainability successfully. Since being effective is inextricably linked to both the what and the how, this researcher sought to explore these aspects in the literature and understand what leadership style(s) would be able to define the leader's effectiveness in leading the Sustainability Agenda.

The researcher tries to capture below the key leadership styles detailed in leadership literature and comments on their relevance to the challenge of leading the Sustainability Agenda:

1.   **Kurt Lewin's Leadership Styles (1939)**

Kurt Lewin listed the following prominent styles of leadership:

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- Autocratic or Authoritarian Leadership: The leader with this style takes decisions without explicitly consulting team members. He uses his own judgement and knowledge of what is required.

- Laissez-Faire or Delegative Leadership: The leader with this style delegates decision making to team members and remains less engaged.

- Democratic or Participative Leadership: The leader with this style consults team members in decision-making and tries to ensure everyone has had their say.

As we can see, the mindset leaders bring to leading vary in terms of level of control of both the process and outcomes. Where the Sustainability Agenda is challenging, it is likely to involve a long and complex journey where the autocratic style or the laissez-faire style are unlikely to work. The Democratic style is likely to build more participation and be more sustainable.

2. **Blake and Mouton's Managerial Grid (1964)**

The hugely popular theory from Robert Blake and Jane Mouton presented leadership styles based on task vs people or relationships as the prime focus. It listed 5 styles:

- Impoverished Style: This style is characterized by low concern for both the relationships and the task.

- Country Club Style: This style is characterized by a dominant concern for relationships, sometimes at the expense of the task.

- Task Management Style: This style is focused on the task and demonstrates scanty concern for relationships.

- Middle-of-the-Road Management Style: The leader with this style displays moderate concern for both the relationships and the task, trying to balance both and not coming across strongly one way or the other.

- Team Management Style: The leader with this style demonstrates high concern for both the people and the tasks to be delivered.

As is obvious, the Team Management style is ideal to ensure the work gets done but that the people are also taken care of and that one is not at the expense of the other. It is also obvious that different leaders, while typically falling into one style or the other may demonstrate characteristics of the other styles depending on the situation and the importance of the task or relationships. The sustainability challenge requires a focus on the task but a simultaneous focus on the people, making this style the most effective in the long run.

3. **Hersey and Blanchard's Situational Leadership Styles Theory (1969)**

This theory posits that the leadership style that leaders adopt depends on the situation, described as the competence levels of followers and their dependability and maturity. The 4 styles this model puts out are:

- Telling or Directing Style: This style is of a leader whose focus is on getting things done and the concern for the people is low.

- Participating or Supporting Style: The leader with this style demonstrates high focus on the relationships but a low focus on the task delivery.

- Delegating Style: This style is characterized by both low focus on the tasks as well as on the relationships.

- Selling or Coaching Style: The leader with this style works through their people to achieve both the delivery of tasks but also the empowerment and development of their people.

While there are many commonalities in this categorization with the previous theories, this style advances the definition of leadership by bringing coaching and empowering responsibility within the fold of the leadership responsibility. Delivering the Sustainability Agenda requires developing the people and enabling them to succeed, hence the Coaching style is the relevant style to use.

5. **Burns' Transformational and Transactional Leadership (1978)**

This theory has been discussed extensively in this paper already. The two styles that Burns described are:

- Transformational Leadership Style: The leader with this style inspires followers to stretch and achieve extraordinary outcomes out of their own volition.

- Transactional Leadership Style: The leader with this style exchanges rewards for delivery and establishes a quid-pro-quo relationship.

This theory advanced leadership literature by pointing to the opportunity leaders have to bring about radical change and the style that would enable them to lead for

extraordinary results. As discussed previously, the Sustainability Agenda requires Transformational Leadership across almost all contexts with the transactional style working where the leadership strategy, tasks and deliverable have been defined and all stakeholders already aligned and where the external environment is likely to remain stable.

5. **Goleman's Six Emotional Leadership Styles (2000)**

Goleman who related leadership to emotional intelligence laid out 6 styles namely:

1. Coercive Style: The leader with this style forces followers to immediately comply with their instructions.
2. Authoritative Style: The leader with this style sits atop the hierarchy and commands them to work towards a vision that he will have defined.
3. Pacesetting: The leader with this style defines what he expects and is characterized by the high standards and pace he sets.
4. Democratic: The leader with this style engages in dialogue with all and tries to get a consensus or at least go with the majority view.
5. Affiliative Style: The leader with this style focuses on harmony and building emotional bonds with the followers as a means of achieving tasks.
6. Coaching Style: The leader with this style focuses on developing the capability of the people to be able to take on the challenges.

These styles mirror elements of styles discussed earlier and introduce the need for emotional intelligence if leaders need to bring people along to achieve their tasks. The

applicability of this theory on the Sustainability Agenda is in the recognition that leaders have to be emotionally invested and connected with their people, making the coaching style the likely option that may succeed.

6. **The Full Range Leadership Styles Model (1990-2000s**)

Developed by Bernard Bass and Bruce Avolio in the early 1990s building on Burns' and James McGreggor's work, this theory incorporates the spectrum of leadership styles based on the visible levels of the leader's engagement from passive to highly active. Leader engagement has been found to be a key determinant of effectiveness (Aboramadan and Dahleez, 2020).The 3 styles based on the levels of the leader's engagement are defined on a spectrum are:

6.1 **Passive-Avoidant or Laissez-Faire or Non-Leadership Style**

The leader with this style is conspicuous by his absence in decision making, setting the course, giving feedback or even taking responsibility when things go wrong. This style is characterized by non-involvement, not wanting to take initiative to change anything and an indifference to aspirations or needs of followers.

6.2 **Transactional Leadership**

The leader with this style manages by exception, being passive generally and only getting involved when tasks are not delivered or when issues arise. It is typical for leaders with this style to only track non-performance or delivery that falls below standards rather than a proactive approach to tacking problems before they become serious. Some leaders

may be more engaged and proactive but even these leaders focus on rewards being contingent to the meeting of expectations.

6.3   Transformational Leadership

This theory has been discussed extensively in this paper but by way of a summary from a leadership style perspective, the leader with this style demonstrates all the qualities that others look forward to in leaders. Their influence comes from being respected, trusted and even admired. By acting in congruence with the values they talk about, they walk the talk and take a position on difficult but important issues. Leaders with this style motivate people to articulate a compelling vision of the future, displaying their personal commitment to it, assuring the team that they can achieve more than they think is possible and building optimism and 'can do' attitude. They challenge the impossible and encourage innovative ways of solving problems, tapping into people's creativity and personal purpose. To do this they try to connect to their followers at a deeper level, seeking to understand each person's values and drives individually and personalizing the way of stretching and developing them. This style adds the prospect that to be effective, leaders may need to integrate and balance these styles, dialing up and down on different aspects depending on the context, what needs to be achieved and how the followers are set up to deliver. For any big change, while Transformational Leadership is often seen as the most effective, the Laissez-Faire style is usually the least effective, often lowering both morale and performance. and fostering low levels of commitment and performance. Even transformational leaders have to adapt their style from time to time to maintain stability and consistency in the organization, which is necessary for delivering more immediate and

short-term goals. As is obvious, this theory in incorporating the full range of leadership styles, offers a much more comprehensive model than any of the others for examining effective leadership in various organizational contexts. In the context of the Sustainability Agenda, this theory offers helpful labels to help us categorize typical behaviours and mindsets leaders demonstrate. It highlights the need for Transformational Leadership style particularly where the challenge is significant.

There are other researchers who have proposed other styles such as the Agile Leadership Style (Cinnioğlu, 2020) but their applicability appear to be rather context specific.

Researcher's Conclusion: Based on the study of these models and theories on leadership style, this researcher concludes that the most relevant theory to explore further is the Full Range of Leadership theory as it offers the opportunity to establish what the most commonly observed leadership styles are and whether the style(s) is seen as effective in delivering against the demands of the Sustainability Agenda.

To understand what kind or style of leadership was most effective in driving the Sustainability Agenda, this researcher referred to Bass and Avolio's 'full range of leadership' theory, one of the most well established and well researched theories on leadership effectiveness which highlights the different styles of leadership demonstrated by leaders and how this reflects their level of engagement and commitment to the task or cause. This theory explores the leadership styles from the perspective of levels of leader engagement and classifies the three predominant styles as Transformational, Transactional

and Passive-Avoidant. From a practitioner perspective this researcher finds these three styles explain the typical behaviours and mindsets leaders demonstrate in business on the topic of sustainability.

It is widely recognized that to get momentum on the Sustainability Agenda, the aspect of getting employees engaged and committed to the agenda, is critical. Even though there are many factors that influence employee commitment, research conducted over the years reveals that leadership styles are probably the most important predictor of organizational commitment. In their 1995 book, Improving Organizational Effectiveness through Transformational Leadership, Bass and Avolio covered this aspect extensively. Others who studied organizational commitment and job satisfaction also touched on the role of leadership style among other factors. (Lok and Crawford, 2001). Most studies which focused on the relationship between leadership styles (transformational, transactional, and laissez-faire) and employees' commitment have shown that there is a positive relationship between Transformational Leadership style/ Transactional Leadership style and employees' commitment. In the same vein, laissez-faire leadership style has yielded a negative connection with employees' commitment, irrespective of the work settings (Garg and Ramjee, 2013). Studies have shown that there is positive and direct relationship between Transformational Leadership style and many aspects of engagement such as organizational justice distributive, procedural, and interactional, leader-member exchange, perceived organizational support and trust (Ahmad et al., 2008).

While highlighting the three most prominent styles or kinds of leadership as Transformational, Transactional or Passive-Avoidant, studies suggest that every leader

displays both the transactional and transformational aspects through their actions and words, but based on their profile, each leader demonstrates more of one and less of the other even in the same situation. The context of the business and the need for leadership on the subject are other variables that influence the style the leader deploys.

To understand if Transformational Leadership style was indeed the most important style of leadership if leaders in business had to deliver effective results with the urgency required, this researcher examined the relevance of the four major factors of Transformational Leadership for the Sustainability Agenda and summarized the analysis as follows:

1.   **Intellectual stimulation**: Transformational leaders challenge the status quo and also encourage creativity among followers. The Sustainability Agenda is a complex one for most organizations and will demand the creativity of not just the leader but the broader organization teams. The leader will need to articulate the challenge and encourage followers to explore new opportunities to learn and new ways of doing things to better deliver on their sustainability goals.

2.   **Individualized consideration:** Transformational leaders support and encourage individuals to recognize their respective roles and strengths. The bigger the Sustainability Agenda in organizations the more leaders will need to encourage people to share ideas and recognize the unique contributions of each member.

3.   **Inspirational motivation**: Leaders need to inspire. Leading the Sustainability Agenda successfully demands that leaders have a clear vision that they communicate

powerfully in their organization, inspiring them to go beyond the contractual tasks and take on the challenging aspects.

4.	**Idealized influence:** The transformational leader serves as a role model for others. To deliver on the Sustainability Agenda, we need employees in organizations to trust and respect the leader, emulating, and internalizing their ideals. Studies have shown that Transformational Leadership exhibits a positive relationship with commitment to change (Peng et al., 2020).

Leading the Sustainability Agenda in Business requires motivating employees through inspiration, getting their commitment, focusing on long-term success, and using intrinsic rewards (esteem, pride, etc.) to sustain the momentum, underlying the relevance of the Transformational Leadership theory. At the same time, in acknowledging the need for the transactional elements of leadership, this theory keeps us anchored to reality. Transformational Leadership Theory together with the element of Transactional leadership is therefore among the most comprehensive leadership theories in organizational studies specially when it comes to leadership in times of change. To carry the Sustainability Agenda through the Leader's own legitimacy and standing in the organization will matter. This will require delivering on the agreed KPIs of the day- to-day business, and balancing the strategic with the operational and tactical goals (Najmaei, Quazi and Behnia, 2017)

The Sustainability Agenda will require Transformational Leadership especially when organizations need to make radical changes to survive increasing economic competition while delivering the Sustainability Agenda. In today's world, Business needs leaders with the will to be transformative and not just transactional (Kristijono et al.,

2022). Leaders who wish to lead in transformational ways must clearly understand the leadership demands in transforming (Poutiatine, 2009).

Reality in business: While the Transformational Leadership theory feels extremely relevant for driving the change in the Sustainability Agenda across companies, as a practitioner it is easy to see that the reality is that most organizations run on Transactional Leadership specially when it comes to the topic of environmental sustainability, with leaders and the system working on rewards and punishments, focusing on compliance and short-term goals, and leaders driving these using extrinsic rewards (such as pay, promotions, etc.). This is how the system is built, at least in Business. Most organizations struggle to accommodate the needs of all stakeholders and still prioritize the needs of shareholders above all. This model of leadership rests on leaders practicing a give-and-take approach or a quid pro quo behavior, rewarding employees for doing what is expected, for producing what management needs. This form of Leadership even if it fails to connect to employee's intrinsic motivators and thereby retains them only till their rewards feel adequate for the sacrifices they make, reflects the reality of the workplace and continues to be the predominant model in most organizations (Hoyle, 2002).

This researcher's perspective is that while we indeed work in a very transactional order, the transformation that is needed today cannot be achieved by a mere extension of the transactional mindset and activities or being transactionally more efficient. It needs Business to reckon with the seriousness and urgency of the climate crisis, stop activities

that may have hitherto been considered acceptable but do not pass the test of the ethical scrutiny today and quickly pivot to the new reality.

More than ever before, the business reality of today needs leaders to deploy the Transformational leadership theory where elements of Transactional leadership will need to come in with structures and processes to get business to deliver on the bottom-line while meeting the transformational needs of the stakeholders who are interested in the long-term success of the organization. To have effective Transformational Leadership, these aspects or dimensions need to be balanced. As elusive an idea as it may seem, successful leaders of organizations that have survived for decades have typically been able to balance the transformational with the transactional demands on them.

Examples of Transformational Leadership:

In a report published in April 2010 in Strategic Finance, authors Marc J. Epstein, Adriana Rejc Buhovac, and Kristi Yuthas described the study supported by the Foundation for Applied Research (FAR) of the Institute of Management Accountants (IMA) which examined how leaders in four leading companies integrated the Sustainability Agenda in their day-to-day leadership and management decision making. These four companies were Procter & Gamble (P&G), Nike, The Home Depot and Nissan North America. These companies were selected as they had been rated highly on various indexes of sustainability and had built a reputation for leading practices in managing sustainability. The study explored how trade-offs were made in these companies to achieve optimum financial performance that also achieved the social and environmental performance goals. These

studies demonstrated that sustainable performance is positively influenced by Transformational Leadership.

A few leaders who have been truly transformational (Esty and Bell, 2018) and whose impact has been significant both in terms of what they have achieved as well as how their actions have inspired others and transformed the rules in their industry are discussed below:

Paul Polman of Unilever from 2009 to 2019 is widely acknowledged as a Transformational Leader. He proposed the Sustainable Living Plan, which put environmental progress at the core of his business strategy. It expected the company's 170 000 worldwide employees to integrate sustainability into their work. Many companies from consumer goods to telecommunications took note of the work of Unilever and emulated their good practices.

Likewise, Elon Musk, CEO of Tesla has been seen as a transformational leader. He articulated the core elements of Tesla's mission in his 2006 Master Plan where he put "provide zero emission electric power generation options" alongside "build sports car". Musk's vision drove the acceleration of electric vehicle development and inspired a generation of new EV manufacturing. Musk sponsored research and innovation in renewable energy sources and battery technology making Tesla a market disrupter and changing the rules of the game in the industry. Even though people agree on how successful SpaceX has been, its focus on reusable rockets sends a strong signal on the responsibility players on space exploration need to exercise towards the environment.

Howard Schultz, the CEO of Starbucks from 1987 to 2000 transformed the company's approach to responsibility through several sustainability initiatives including their very visible recycling programs, raising awareness on sourcing coffee ethically and investing in renewable energy. Starbucks was considered a thought leader whose position on social sustainability, involving the community and promoting fair trade practices became a galvanizing point for customer loyalty.

Indra Nooyi, who was the CEO of PepsiCo, was transformational in that she made sustainability matter with the Performance with Purpose initiative. Putting sustainability at the core of the business strategy, this initiative focused on promoting healthier products, sourcing and processing using best in class processes thereby building communities as part of their ecosystem and keeping green options in energy sources, transportation, and waste management in mind to enhance the company's environmental footprint. PepsiCo's record for reduction of water and carbon emissions as well as reducing waste under Nooyi' leadership set new benchmarks in the industry and was seen as offering distinct competitive advantage.

There are many other examples of transformational leaders who have been less high profile but whose impact has been across their organization if not across the industry. There are many more examples where some elements of Transformational Leadership have been more impactful than others (Blight, 2023). A study in China's construction industry found that all elements of Transformational Leadership except inspirational motivation had a positive correlation to employee sustainable performance, perhaps

because of the relationship and harmony focus on the context of China (Jiang, Zhao and Ni, 2017).

It is important to mention as well that notwithstanding its practical illustration in the form of examples such as those above, researchers point out the shortcomings of the Transformational theory. Here are the most relevant arguments against the theory:

a)   Some researchers have pointed out that the current concepts of Transformational Leadership have unclear theoretical bases, confound leadership and its effects, and are not necessarily suitable for all kinds of organizations (Jensen et al., 2019). In their work Conceptualizing and Measuring Transformational and Transactional Leadership, authors Jensen and others made a compelling case for relooking at the basis of the assertions about transformational leaders.

b)   The use of the term "followers" rather than "subordinates" creates confusion in the study of formal organizations (Andersen, 2015).

c)   Transformational Leadership also does not appeal to everyone (Hansbrough and Schyns, 2018) and not everyone is uniformly 'transformable'(Seitz and Owens, 2021).

d)   Transformational Leadership theory is largely constructed from an assumption that leadership looks and works identically universally across contexts without biases of gender, race, class, sexual, and national identities (Ladkin and Patrick, 2022).

This research acknowledges these key shortcomings. Despite some validity in these challenges, scholars and management practitioner accept that the Transformational Leadership theory is relevant across organizations looking to make a transformation. Also,

it is more tested and validated than many other Leadership theories and certainly the most validated theory in the Transformational Leadership space. The lack of its appeal to everyone and every situation is acknowledged as being true about this as well as any theory in leadership studies. Scholars agree that this theory has a universal application because it has a capacity for being adapted to different contexts and cultural settings (Paulienė, 2012).

This researcher takes a practical view that this theory offers value notwithstanding the limitations, in the context of the sustainability challenge. It takes the view that the effect of Transformational Leadership is the desired transformation in the organization's culture and a better sustainability performance than otherwise. Keeping in mind the objective of this research, it takes a broader view of impacted people and uses 'stakeholders' rather than 'followers' or 'subordinates' as the subject of the leader's impact. This research acknowledges that many people and many situations will not see Transformational Leadership as the right style of leadership and that the context will be a key variable in the discussion on the most appropriate leadership style.

The aspect of adaptation is particularly important if we intend to apply this theory globally on the topic of Sustainability Agenda. Leaders of multinational organizations need to be particularly aware of country and regional cultural differences and yet adopt global standards, expectations, and deliverables. Global leaders with high levels of cultural intelligence are highly effective in their Transformational Leadership style because they are better able to understand the differences of other cultures and appropriately adjust their behavior (Ramsey et al., 2017).

The style of leadership and the leader's level of work engagement has an undeniable impact on the followers in the organization, impacting their sense of optimism (Lu, Xie and Guo, 2018) . While all styles of leadership affect followers, many studies have established that certain styles of leadership such as Transformational Leadership and to some extent Transactional Leadership can be very engaging for followers and create a positive mental state characterized by a feeling of high to overwhelming satisfaction, feeling energetic, strong, inspired, proud, enthusiastic, and fully immersed in the work (Blomme, Kodden and Beasley-Suffolk, 2015).

The transformational style of leadership builds a shared sense of commitment to address defined challenges. This stimulates employees to achieve stretch goals, develop their competencies and try to excel. The leader's commitment and personal involvement in the subject of sustainability can be infectious and build commitment and the drive to address the challenge across the organization.

In the context of the Sustainability Agenda, it is useful to highlight the relevance of Transformational leadership since it is about how leaders influence change in the awareness of stakeholders of how critical this agenda is for businesses to commit to and persuade them to see not just the imminent challenges but also the possible growth opportunities. With their vision of what the world can be like if we transform current business paradigms and models, Transformational leaders proactively work on the development of the individuals and teams so that employees look to exceed expectations and drive pathbreaking innovation. By role modelling and addressing deeper drivers like

the individual's purpose, these leaders build the optimism among their associates to strive for higher standard of performance and business ethics.

The most established instrument for assessing leadership styles in the Full Range of Leadership model is the Multifactor Leadership Questionnaire (MLQ) (Tejeda, Scandura and Pillai, 2001).With the focus of this research being on understanding the style of leadership that stakeholders observe on the Sustainability Agenda, this researcher studied where the MLQ had been used for the purpose of assessing leadership styles among leaders driving the Sustainability Agenda. Not too many studies seem to have used the MLQ to investigate the leadership styles of sustainability leaders. The few studies this researcher was able to access are summarized below:

A study titled 'Leadership in the North American environmental sector: Values, leadership styles, and contexts of environmental leaders and their organizations' involving 73 leaders of environmental product and service organizations as well as activists showed the importance of contexts as a key variable. Nonprofit environmentalist organizations had much more Transformational Leadership than for-profit environmental organizations (Egri and Herman, 2000).

Another study titled 'Sustainable leadership practices for enhancing business resilience and performance' showed that sustainable principles improve business performance and make it more resilient. This study established that there are alternatives to the shareholder-first view of stakeholder management in businesses and that many successful companies are already using a broader view of stakeholders (Avery and Bergsteiner, 2011).

The third study titled 'Greening Organizations through Leaders' Influence on Employees' Pro-environmental Behaviors' established the connection between the leader's behaviours with respect to environmental sustainability to employees' behaviours on the same. The MLQ was used to measure the leader's leadership styles and map it to the degree of influence in the environmental sustainability space (Robertson and Barling, 2013).

Other studies related to the leadership of the Sustainability Agenda which used the MLQ seem to be in not for profit or in community contexts. For example, the study titled 'Community Leadership Development' focused on capacity building in the community (Kirk, 2004).

This researcher could not access if these studies adapted the MLQ to ensure it is fit for the purpose of the research. But since these studies had no comments on the same, it was assumed that even if these were adapted, no validated versions of these adapted MLQs are available.

2.6 Organizational Contexts

It is said that 'Context is everything'. This researcher therefore explored the different contexts of organizations from the perspective of the sustainability challenge to ensure that the context was clarified against which the application of the Leadership competencies and styles could be looked at. This dimension was added to explore differences in the effectiveness of sustainability leadership among leaders who had, at least theoretically, equal measure of critical competencies and the style most appropriate for the leadership challenge.

Contexts can be described from different lenses. In fact, no two organizations share the same context. Yet for the purpose of comparing and contrasting organizations to understand which are more effective and if leadership or other reasons are to be attributed to their success, we need to find a few common measures.

To help us differentiate among organizations in the context of the sustainability challenge, the following three relevant differentiators were explored to understand organizational contexts in terms of:

1. Key Environmental Measures

2. Sustainability related Legislative or Regulatory oversight.

3. Culture

We summarize the findings of each:

2.6.1. Organizational Contexts wrt Key Environmental Measures:

Because of being part of different industries, different organizations' actual environmental challenges can vary from having their survival in question due to their extremely high carbon footprint to not having any concern on their business sustainability. To explain how varied the contexts of organizations can be even when it comes to environmental sustainability requirements, a simple summary of the more recognized areas of environmental obligations are captured below with comments on the kind of organizations or industries each applies to:

Greenhouse Gas (GHG) Emissions: What has become accepted globally is the concept of Scope 1, 2, and 3 Emissions. An organization's direct emissions of GHG from its operations are counted under Scope 1. The indirect emissions typically from the energy it

purchases for its operations are counted under Scope 2. All other emissions of GHG along the value chain including all the suppliers and contractor's operations is counted under the indirect emissions as part of Scope 3. These measures express GHG emissions in CO2 equivalent terms and is called Carbon Footprint, a terminology that has been used internationally. The conventional energy companies including the Oil & Gas majors are expected to report their GHG emissions and disclose Scope 1, 2 and 3 emissions. Materials and Mining, manufacturing, processing, supply chain organizations, agriculture and transport companies are also expected to report on these measures, making this possibly the most pervasive measure in today's time. This is understandable given the carbon intensity in all aspects of industrial and commercial activity. This is why Decarbonization is seen as a common yardstick that applies across companies, even though the effort needed to decarbonize may be quite different depending on the specific context of the company and industry.

Other measures that are also used globally by companies depending on their contexts (Raf, 2024) include:

Energy Consumption: which is typically the measurement of electricity and other forms of energy used by organizations to manage their operations. Increasingly companies are measuring and reporting the amount in percentage of their total energy consumption which comes from renewable energy sources. All kinds of companies which are in manufacturing, processing, transport are expected to report on these. With the upsurge in Artificial Intelligence, the IT companies which are offering cloud computing and AI

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enabled services are seeing a huge spike in electricity consumption and will likely come under greater regulatory scrutiny for full disclosures.

Water Consumption: For companies that have a manufacturing footprint where water is an important resource, the total quantum of water used is tracked. This is increasingly part of the metrics in industrial complexes. Where meaningful, the metric of water Intensity is used to track consumption of water to produce a unit of production. This is also expressed sometimes in revenue terms. Most manufacturing and processing companies are expected to report on these measures.

Waste Management: Most production and processing companies generate waste. Among the metrics looked at by organizations, the common ones include Total Waste produced. Depending on the context of the organization, other waste related metrics can include Waste Diversion Rate which is the amount of waste that would have gone to landfills but have instead been diverted through recycling, composting, etc. typically expressed as a percent of the total waste. For companies that generate hazardous waste, there are typically regulations to report the amount of hazardous waste produced and how they are disposed of. Companies and industries that typically are expected to report on this are into manufacturing, raw material processing, mining, minerals and metals, energy especially if they use nuclear sources, chemicals, agriculture, transport, services such as hospitals and even companies that are in the fold of sustainability solutions such as electrical vehicles, solar panels and batteries. Industrial operations that impact air quality through the emissions of pollutants such as Sulphur Oxides, Nitrogen Oxides, harmful particulate

matter, and volatile organic compounds (VOCs) usually have to report such emissions and stay within mandated norms. Likewise, wastewater discharge is monitored to ensure only that which meets the safety standards are allowed to be disposed to the rivers and seas.

Land Use and Biodiversity: Organizations that are in Agriculture and Forestry as well as construction and infrastructure companies are expected to report on Land Use and Land Cover Change since their commercial goals may impact natural habitats and availability of food and basic measures. Organizations that access and operate in fragile ecosystems such as tourism, mining, deep sea drilling, etc usually get measured on the impact they have on local biodiversity. Qualitative measures include such aspects as efforts made to preserve natural habitats and protect species which are vulnerable and endangered.

Any research exploring effective leadership styles and competencies would need to understand the differences and challenges they pose. To classify these varied organizations in a simplistic way, this researcher uses the metric of GHG since it applies to all to greater or lesser degree and differentiates them based on the extent of decarbonization challenge that each has.

2.6.2. Organizational Contexts wrt the Legislative oversight:

The role of governments through its laws is often considered primary in the Climate Change discission. Government's effectiveness in introducing the right environmental laws and enforcing them is often assumed to explain the improvements on the ground.

A study of CCLW, a public database hosted by the Grantham Research Institute on Climate Change at the London School of Economics tried to understand the extent and nature of climate related legislation over the past 30 years around the world. It noted that while national climate change legislations have ballooned, tangible action on climate change globally still falls woefully short. The period of 2009 to 2014 saw the maximum number of laws being enacted globally, with flagship laws on climate change being passed in the European Union, Mexico, South Korea, and the United Kingdom. Interestingly these pre-dated the Paris Agreement of 2015. All countries today have at least one law on climate change, and some have over 20 laws. (Grantham Research Institute on climate change and the environment, 2024)

This study established that compared with 35 laws in 1990 and 145 laws in 1999, by 2019, 1,800 climate change laws and policies were enacted worldwide. But only 40% of these were passed by parliaments, with the rest being policies by local governments, decrees, and executive orders. For laws to have the desired effect, the need is for the laws to be clear and have teeth but also for them to be effectively implemented. While the study made no comment on how effective these climate action laws have been globally, it observed that the UK, Spain, and South Korean laws on climate change were the most comprehensive. After the Paris agreement, many countries adopted binding net-zero emissions targets that are consistent with the Paris objectives. However, based on recent reports, only 42 of 197 signatory countries have enacted or proposed legislation to translate their pledges to their Nationally Determined Contributions (NDCs) that can make them into official targets.

Though this researcher was unable to ascertain if all industries, especially those with moderate to high carbon intensive operations are covered by these laws in each country, the paper referred to suggested that most of these laws are sector-specific with the energy sector being prime. 60% of these laws cover energy supply, including the impetus to renewable energy, energy demand management and energy efficiency in industrial or residential uses. There were far less laws for the transport and forestry sectors. Interestingly, one third of these laws were about climate resilience and adaptation to climate risks, highlighting that governments are preparing for the inevitable even if they are unable to stop it from happening.

Businesses are coming under fire and as many as 230 cases which can be considered 'strategic climate cases' have been filed against companies since 2015. These include:

o   Cases on 'climate-washing' with no less than 47 such cases filed in 2023 (of the 140 such cases). More than 70% of these cases had verdicts against the companies.

o   At least 30 cases globally are currently trying to hold companies accountable for climate-related harm caused by their GHG emissions.

o   Cases are being filed to ensure companies align their group-level policies and governance processes with climate goals.

o   Cases against corporate directors and officers for management of climate risks.

There are enough global standards and frameworks that are available for everyone. We summarize here the most prominent pieces of such standards and reporting.

Established Global Standards of Reporting: Below are the most accepted global

standards on environmental sustainability reporting and how long they have been around.

Table 1: Global reporting systems, standards and frameworks on Environmental

Sustainability
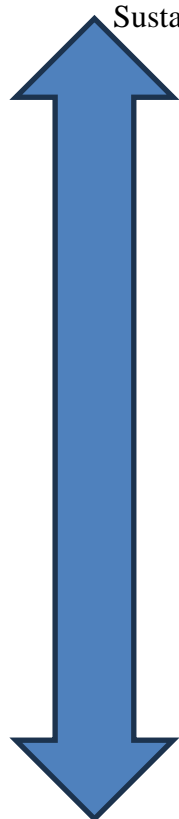
1996	ISO 14001 (Environmental Management Systems) sets an international standard for the systems and processes needed to deliver on environmental management commitments.
2000	Global Reporting Initiative (GRI) provides a comprehensive framework created to establish criteria to hold organizations accountable for responsible environmental business practices
2000	Carbon Disclosure Project (CDP) provides a system for companies to measure and manage environmental impacts and disclose their status/progress
2015	Task Force on Climate-related Financial Disclosures (TCFD) provided recommendations for disclosing financial risks and opportunities.
2015	Science-Based Targets initiative (SBTi) which suggested targets for reducing GHG emissions in line with climate science
2018	The Sustainability Accounting Standards Board (SASB) which provides industry-specific standards for disclosures on sustainability.

Success of Reporting Measures: The above table points to the fact that standards and framework which define the expectations of multiple stakeholders of the business, beyond just the shareholder, have been around for decades. These standards have also been built with significant input from the stakeholders. For example, the Science-Based Target initiative which was launched in 2015 was with the collaboration between Carbon Disclosure Project (CDP), World Resources Institute (WRI), the World Wide Fund for Nature (WWF) and the United Nations Global Compact, which brought in perspectives of the thousands of their corporate members. Despite this, the adoption of these standards and real execution against them seems to have been an issue when we consider what is needed and prescribed vs what has been delivered.

What makes Measurement Work: Among the many topical studies which explain the reason for this gap, a very pertinent one is the September 2020 report titled "Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation'. This report outlines a path for creating consistent metrics for reporting on sustainable value creation. This report which the World Economic Forum prepared in collaboration with the big-four accounting firms (EY, Deloitte, KPMG, and PwC) had inputs from CEOs of as many as 120 companies. The report laid out four pillars, namely the principles of governance, people, planet, and prosperity, which are needed to hold up the structure of sustainability. It made a few significant assertions on Governance which highlighted that leadership was key to progressing the Sustainability Agenda and that no performance measures would work without it. It starts with the seniormost leadership, the governing board. It highlighted that the quality of the governing

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board was critical and that board members needed to have the right competencies to be able to make the right decisions.

2.6.3. Organizational Contexts wrt the Culture:

Many studies have shown that organizations whose culture has a strong alignment with the Sustainability Agenda see better performance not only on sustainability topics but overall business performance. Some have been able to create a niche and a competitive advantage in building the culture that supports sustainability.

Culture has been studied at 3 levels including shared basic assumptions, values and beliefs and artifacts. In the context of corporate sustainability, authors Waewkanee Assoratgoon and Sooksan Kantabutra followed the Grounded Theory methodology and theorized the relationships between organizational vision, values, and practices and corporate sustainability as shown in the illustration below:

Source: Assoratgoon and Kantabutra, 2023
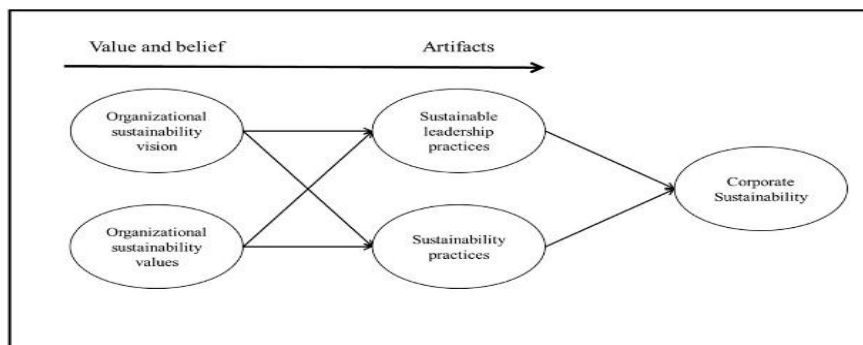
While not enough is known about exactly how the organizational culture including the three levels of shared basic assumptions, values and beliefs, and artifacts impacts sustainability, there are quite a few use cases of the importance of the culture in engendering the effectiveness of leaders in the sustainability challenge.

The role of leaders in shaping the culture is critical. The ability of leaders to set and build a shared vision, create an ecosystem that nurtures sustainability-related learning and innovation, and create a system of rewards that encourages those who make progress, is key in this.

Equally, the role of the culture in allowing leaders down the line to succeed is not to be underestimated. Peter Senge's book "The Necessary Revolution: How Individuals and Organizations Are Working Together to Create a Sustainable World" has several examples to highlight this point.

Many studies published in the Journal of Business Ethics and Sustainability Accounting, Management and Policy Journal looked at both formal systems and processes such as performance criteria, formal evaluation and rewards mechanisms and compared them with informal systems such as organizational culture, influence of leaders irrespective of their formal authority and the capacity of their people to go beyond the formally contracted tasks. Different studies found that it is the informal systems which nurtured the company's drive for sustainability. The formal systems played a secondary role in implementing sustainability programs successfully. Organizational culture was among the most important variables of success.

When cultures of organizations that have progressed their Sustainability Agenda have been compared with those that have not made progress, cultures have been found to be on a spectrum.

At one end of the spectrum are Proactive or Transformative Cultures - Organizations with transformative cultures have been leading the Sustainability Agenda. Companies such as Unliever, Apple, IBM, Amazon and Ikea to name a few have been driving significant transformation in their supply chain and internal standards and leadership assumptions to achieve their net zero goals. For example, when Apple committed to 100% carbon neutrality by 2030, it reviewed its entire supply chain and product life cycle. It transformed its manufacturing processes urging suppliers to switch to much more renewable energy, invested in innovation to reduce emissions, and adopting more sustainable production practices. Challenging its own notions of customer's quality expectations, it introduced the use of recycled materials, shifted to a much more renewable energy mix in its supply chain, and drove innovation to reduce emissions. Though only a smaller challenge, it has achieved net zero in its corporate operations.

Examples of organizations which have a proactive culture on sustainability adopt sustainability as a core value and integrate sustainability principles in the organizational way of thinking and doing things. Leaders at all levels demonstrate their commitment to sustainability. These organizations typically recognize that they need to collaborate with external partners and stakeholders to address their sustainability challenges. It is common to see these cultures encourage continuous learning, agility and innovation. Making

sustainability goals, reporting progress against them transparently to employees and developing practices to enhance accountability is a key driver of their transformation journey. Nike and P&G are examples of a culture that are known for openness, initiative, and risk taking.

Organizations that understand sustainability to be a strategic priority, define the long-term vision and goals and integrate sustainability goals into their business strategies. It is possible to see examples of excellent alignment between the organization's vision and mission and the sustainability vision. The focus is not on compliance or efficiency alone but on delivering the net zero ambitions. Hence their reporting is comprehensive and includes both leading as well as lagging indicators of progress. These cultures are characterized by prioritizing investment in technology and innovations that deliver value. These cultures actively engage their stakeholders which go beyond their Board and regulators and include employees, customers, and the communities they interact with (Epstein, Elkington and Leonard, 2018). At the other end of the spectrum are Reactive Cultures. Cultures which are reactive focus primarily on short-term financial performance and only take action on aspects such as sustainability when they have no other option.

Close to the same end of the spectrum are Compliance-Driven Cultures: Organizations which understand why they need to act on their Sustainability Agenda but take no actions till it is required by statutes and laws exemplify this culture. These cultures implement sustainability reporting and actions only to meet regulatory requirements. Their approach is a risk-based approach, and they focus on avoiding penalties and on basic

reporting and disclosures. There is typically no sustainability strategy or thinking of how sustainability integrates into core business strategies (Erauskin-Tolosa et al., 2020). Organization cultures determine the extent and quality of sustainability reporting and disclosures. Hence to get it done to quality requires much more than an accounting exercise. It is with a culture that emphasizes ethical behavior, one that is committed to stakeholder engagement, and one takes its accountability to the environment seriously that a trusted sustainability report can be expected (Laine, Tregidga and Unerman, 2021).

Somewhere in the center of this spectrum are Efficiency-Oriented Cultures. Organizations with the efficiency-oriented culture are quick to recognize the business benefits of undertaking sustainability related actions. These cultures implement actions to operate more efficiently and / or reduce their operating costs. The focus of these cultures is less on doing the right thing and more on getting short-term resource efficiency or reducing wastes and costs. While these cultures adopt technologies and practices that enhance productivity, they do this as part of programs that guarantee subsidies or grants. Though small improvements happen, the improvements are not deeply embedded in the organizational culture. Leadership experts, Sustainability professionals and other practitioners in business roles this researcher spoke to emphasize the importance of culture in driving the Sustainability Agenda.

Aspects this researcher was able to understand around the culture that are needed to drive sustainability included the following:

1. **Organizational Values**: Examples of organizations that lead in Sustainability practices embrace values such as using a 3P framework for defining business success, social responsibility, driving stewardship, adopting the SDGs and including ethical behavior in their leadership framework. In her book Leadership for Sustainable Futures, Gayle Avery identified 19 specific elements that characterize what she called the Honeybee leadership philosophy, a value system that is the opposite of 'the tough, ruthless, asocial and profit-at-any-cost Locust philosophy'. The book 'Sustainable Leadership' by Gayle C. Avery and Harald Bergsteiner adds 'four more practices that drive long-term organizational performance: staff engagement, self-managing employees, trust and valuing employees. We show how all 23 elements contribute to the competitive advantage of a Honeybee firm and make the business case for implementing these practices. The aim is to provide guidance for those enterprises seeking to become more sustainable.

2. **Demonstrable Leadership Commitment**: In organizations successfully delivering their Sustainability Agenda, leaders actively promote the agenda and use opportunities to remind teams of how they are doing on agreed sustainability actions and practices. Leaders who demonstrate the commitment to the long term and yet do what is needed for sustainability in the short term while delivering their best towards stakeholder commitments of profitability, get committed followers and a culture of conviction rather than skepticism.

3. **Galvanizing Employees:** These organizations involve employees in decision making processes around sustainability initiatives and actively encourage employees at all levels

to participate in these initiatives. Unilever is often cited as an example of a company that integrated its Sustainable Living Plan into its business strategy, set goals including sustainability related goals for employees and got them to be active participants.

4. **Learning:** Best in class organizations encourage employees to learn about the relevant aspects of the Sustainability Agenda such that there is conversation, debates and dialogues on the dilemmas it presents. This drives home the seriousness of the topic and the inherent challenges that the leadership needs to grapple with.

5. **Continuous Improvement and Innovation:** Organizations which have a continuous improvement mindset realize that the Sustainability Agenda requires constant work and that many small improvements can take it further, whether in terms of opportunities to conserve energy, testing of options to change sources of power to renewable options, meeting the ever increasing reporting requirements, better data analysis learning and the occasional innovation that is necessary to adopt new technology or change the business funding models.

6. **Incentivizing and Recognizing:** Organizations which put their 'money where the mouth is' and set up incentive structures that monetarily reward contribution in sustainability and recognize publicly credible work in this space are seen to have made progress.

7. **Communicating to Stakeholders:** Organizations which have active communications with stakeholders whether they are external such as independent Board Directors, shareholders, customers, suppliers, and the community are seen to be successful in building commitment to their plans. Patagonia set an example of where it identified the

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waste in the garments industry to promote environmental activism and create the USP for itself in a very competitive industry through sustainability focused production processes and programs like the "Worn Wear" program which promotes recycling and the cyclical economy.

Organizational cultures can be viewed from many lenses and aspects. Studies on organizational culture archetypes have been found to bracket cultures in different ways, based on their area of focus. For example, in a study titled 'Organizational culture archetypes and firm performance', 309 firms were studied over a 5-year period to demonstrate that organizational cultures can be represented by three underlying cultural archetypes: customers, people and performance (O'Reilly, Cao and Sull, 2024). From a sustainability lens, all three archetypes hold the promise of effective delivery of sustainability leadership – hence this categorization does not offer a good basis of explaining differences in the effectiveness of sustainability leadership. Yet another set of archetypes from the perspective of sustainability challenge categorize organizational cultures as either compliance-driven, or efficiency focused or transformative (Den Hartog, Van Muijen and Koopman, 1996). Since these culture categories mirror the leadership styles of passive to transactional to Transformational Leadership, this researcher believes that this classification may be repetitive and less helpful. Organizational cultures where there is a belief in the continued success of the organization into the future, are likely to be more focused on sustainability than those which are of the belief that the present is all that really matters. This can be seen also in national cultures. In his paper titled 'Challenges for sustainability in cultures where regard for the future may not be present', the Crabbe and

James highlight how some cultures do not think of sustainability since they don't see how the future will be impacted by the decisions of the present (C. Crabbe, 2006). Other studies look at the culture of sustainability-related innovation performance vs a culture of economic innovation performance. Yet other studies have shown that business performance relative to competition as demonstrated by profitability, size, growth rate, and market share was correlated positively with customer orientation. Also, cultures of competitiveness (markets) and entrepreneurship (adhocracies) outperformed those cultures which focused on internal cohesiveness (clans) or rules (hierarchies) (Deshpandé, Farley and Webster, 1993). Cultures of successful market innovation also improved performance. Culture of collaborating with internal and external parties; Many studies opine that organizations that have a culture of driving science and innovation along with others can help to make progress in sustainability (Hecht et al., 2012). Researches which have studied the critical ingredients of cultures of sustainability have suggested the concept of human–nature connectedness as a fundamental value. The ability for people to have conversations about sustainability norms is yet another important requirement. The space within the culture for the leader to build a shared vision of a sustainable future is no less important (Kashima, 2020).

Based on the above, this researcher shortlisted the following archetypes of culture related to the topic of leadership of the Sustainability Agenda. So, organizations can have a culture of

1. Focusing on customer's needs to develop products and services.

2. Developing people's competencies to manage sustainability challenges / opportunities

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3. Being execution focused to get all commitments delivered including on sustainability.

4. Encouraging experimentation and innovation to get better solutions to challenge.

5. Support from the Board downwards for the Sustainability Agenda

6. Building partnerships to strengthen the sustainability ecosystem inside and outside.

Summary: Based on the study of the 6 aspects covered in the Literature Review, this researcher intends to collect data on a survey and validate a few previously established findings such as the critical competencies of leaders driving the Sustainability Agenda, while building elements not validated before such as the leadership style that is most effective for the challenge. In doing this the organizational context and culture will be looked at to see if they have any bearing on leadership effectiveness. It is hoped that a relevant and validated framework of leadership effectiveness will enable practitioners to define expectations of the Leaders of their Sustainability Agenda better. It will also hopefully enable selection, performance management and development of the leaders more effectively thereby supporting the progress of the agenda. This will enable organizations to deliver their Sustainability Agenda better, improving the organization's reputation while building greater stakeholder confidence and commitment in this much needed area and through it all, helping us arrest climate change and secure a more sustainable future.

CHAPTER III:

METHODOLOGY

3.1 Overview of the Research Problem

The research problem this researcher formulated was as follows: what leadership styles and competencies enables the business leader to be most effective in addressing the environmental sustainability challenge.

3.2 Operationalization of Theoretical Constructs

The key theoretical constructs this research needed to study and define were the following:

1.   Effective Leadership Styles

2.   Critical Leadership Competencies in driving the Sustainability Agenda in business

Key Terms clarified It is important however to understand how certain key terms have been interpreted in this research.

The words 'sustainability' and 'sustainable' are often used interchangeably specially in the context of management and leadership. This can make 'Sustainability Leadership' and 'Sustainable Leadership' sound like the same thing. It is important for the purpose of this research that we note the similarities and differences in these words. While 'sustainability leadership' and 'sustainable leadership' are related words and stem from similar origins, they differ in focus and scope.

Sustainability. The Cambridge Dictionary defines the term Sustainable as 'what is able to continue over a period of time and the term 'Sustainability as 'the quality of being able to continue over a period of time', highlighting the common focus on lasting for a length of time. Since the term 'Sustainable' grew from the focus on environmental concerns, it is not surprising that it can inadvertently imply environmental sustainability. But 'sustainable' in itself need not involve the environment. For example, a sustainable work-life balance is essentially the amount of work that an individual can continue over a period of time while keeping the right balance with other aspects of life. The term 'Sustainability' has come to have a more intimate association with the environment and is often defined as 'the quality of causing little or no damage to the environment and therefore able to continue for a long time'.

Sustainable Leadership. The focus of Sustainable Leadership may be more on the sustainability of the act of leadership itself. This translates to the leader building systems and processes that can ensure the legitimacy of the leadership and its effectiveness over time. It may involve the leader paying attention to the culture of the organization and people practices to ensure these are sufficiently flexible and can adapt over time. The premise is that sustainable leadership can ensure the organization's success for long. For example, being profitable enables a commercial organization to sustain its business operations, so profitability is clearly an important parameter of a sustainable business. In turn, sustainable leadership may actually require profitability to be prioritized.

Sustainability Leadership. The focus of 'Sustainability Leadership' is on the performance of the organization on environmental parameters. By extension therefore, the

leader here works to reduce the negative impact of his organization's operation on the environment, improve social equity potentially beyond their own organization and build programs and processes to secure the long-term resource sustainability of the organization's programs. Profitability may not be the focus and priority of sustainability leadership. In fact, the prioritization of profitability at the expense of other elements such as the environment may be a problem.

This research uses Sustainable Leadership to refer to the aspects of leadership that look at leading in a systemic way, where processes and systems reinforce one another and enable the system to survive and withstand challenges. This meaning therefore makes leadership an outcome of a "system of principles, processes, practices and values that a firm adopts in pursuing its future" (Avery and Bergsteiner, 2012). Sustainable leaders may not necessarily be focused on the environmental sustainability aspects unless the environment is the pressing concern and threatens the continuation or survival of the business. This is different from a leader leading the Sustainability Agenda who may actually be less concerned about the continuation of the business and more concerned about ensuring that the business is not harming the environment at least in the long run. The understanding this leader brings is that it is important to take care of the environment if the business has to be around in the long run. This is different from the leader who is always and only focused on the short-term profitability and ignores the demands of the long run. A sustainable leadership paradigm is about effectiveness of leadership in the long run irrespective of whatever the focus of leadership is on. Sustainable Leadership practices in mature best-in-class companies include recruitment and progression practices

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that are fair and transparent, functional competence and leadership development, succession planning, employee engagement and wellbeing programs, etc. It may also include team effectiveness, organizational culture reviews, programs to enhance quality, continuous improvement and innovation and structures that enable participative decision making, recognition and knowledge sharing among other things.

3.2.1 Leadership Style. The key aspect this research explores is the leadership styles of leaders leading the Sustainability Agenda. Leadership style is the combinations of patterns of behavior, mindset, and attitudes that the leader shows up with. Since mindsets, beliefs and attitudes are not visible, it is the patterns of behavior and actions that become the visible representation of the leader's mindsets, beliefs and attitudes and is collectively referred to as 'leadership style'. In the role of leading the sustainability challenge, the leader's style is what people will 'see'. These visible behavioral patterns arise from a leader's beliefs, values and attitudes which can be invisible but very deep and strong anchors of behavior. Hence when asked about leadership styles, leaders often explain this in terms of a mix of what they typically do and why they do it. For example, a leader who says 'my style is participative leadership' may often go onto add that they are strong believers in democratic values and like to hear different perspectives on any topic and share the responsibilities of leading different projects with their team members. The attitude they bring to the task of leadership is one that everyone is capable of leading and needs to be given the opportunity. Their behavioral patterns may be of empowering team members and having high expectations from them.

3.2.2 Critical Leadership Competencies

Competencies. The next element that can make the big difference in effectiveness in delivering the task is the competency of the leader. Competencies are the skills that an individual needs to do the job. Competencies can broadly be divided into Functional and Leadership Competencies. Functional Competencies as the name implies are the technical competencies the person needs to do the perform the technical aspects of the job, such as the architect's skills of designing the plan for a house or the accountant's skills preparing the P&L or Balance Sheet.

Leadership Competencies: Leadership competencies are the skills and capabilities that the leader deploys to get the work done with and through others. The architect who is competent in completing the drawings of the house may not have the competencies to organize resources to construct the house or the project management competency to direct the different sets of people needed to construct the house, e.g., the masons, bricklayers, plumbers, carpenters, electricians, etc. In addition to directing diverse groups, there is also the need to know how people are feeling, what they are willing to commit to, what they expect in return and how they can be motivated to give their best. These are all leadership competencies, without which it may be difficult if not impossible to achieve anything substantial that requires multiple people to collaborate in.

Critical Competencies: For any role, the candidate who possesses the key competencies required to do the job is considered a qualified candidate. In job descriptions, the competencies required define the expectations from a candidate and enable the selection of the right candidate. Critical competencies are those that the incumbent must possess, to a

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sufficiently high degree of proficiency, to be able to do the role well. To lead the sustainability challenge well, leaders would have to possess the critical competencies needed. This research explores 'what competencies the business leader needs to have to lead the Sustainability Agenda effectively'.

As a practitioner of Human Resource Management, this researcher experienced firsthand over 30 years of work, the importance of the leadership competencies in leading an organization forward. The new demands on organizations meant that the way forward was not more of the same. The fact is that organizations have to reinvent themselves and redefine their purpose to meet the objectives of the Triple Bottomline. On the aspect of 'the Planet', this catapulted the Sustainability Agenda to the fore. For most organizations the Sustainability Agenda was likely to be the most significant change and transformation initiative they had ever undertaken. The importance of the right leadership competencies needed for driving this change and transformation initiative could not be over-emphasized.

This researcher studied over 22 of the most prominent leadership theories to cull out the most relevant competencies in the context of Leadership of the Sustainability Agenda in business.

Upon reading the literature on Leadership Theories, it also became clear to the researcher that the leadership competencies relevant for the Sustainability Agenda had been sufficiently researched in the last few years. Given the number of studies that increasingly confirmed the importance of a number of leadership competencies that leaders needed to demonstrate for driving the Sustainability Agenda, it was clear that more

research on this area would not unearth anything new. The researcher therefore shifted the focus to the selection of the most critical competencies.

Through a process of one-on-one interviews with a wide range of senior business leaders and review of the literature on competencies for sustainability, the author could ascertain the most critical competencies that seemed to be top of mind for respondents universally when they thought of the most effective business leaders who drive the Sustainability Agenda effectively. The problem was that even this was an extensive list. Based on his practitioner knowledge, this researcher knew that an extensive list would have limited practical value whereas a small list of 3 to 5 would be practical to refer to during selection to development of business leaders for the Sustainability Agenda. Since the specific competencies that were most relevant for the Sustainability Agenda fell into the four discreet leadership competency groups below, the researcher decided to take these four groups as the critical few to base the research on:

- Transformational Leadership competencies

- Ethical Leadership competencies

- Strategic Leadership competencies

- Team Leadership competencies

Scholars may argue that each of these competency groups can be further broken down into more specific competencies. While this researcher acknowledged this, it was important to keep the focus on a few critical competencies. Hence this researcher decided to refer to the group of competencies associated with these 4 areas as the critical competencies.

The next theoretical construct was on the point that competencies are closely

aligned with Leadership styles. Competencies refer to the ability to do something

successfully or efficiently and is demonstrated through actions. A repetitive set of actions

is called a behavior. The theory of conscious competence explains how individuals go

from conscious incompetence to unconscious competence. Our patterns of behavior are

the demonstration of our competencies at the stage of unconscious competence. Since

leadership style is the combinations of beliefs, mindset, attitudes and patterns of behavior

that the leader demonstrates, it follows that it is the combination of beliefs, mindset,

attitudes and competencies at the level of unconscious competence. This insight enabled

the researcher to drop the exploration of critical competencies but rather use the

behaviours that go with critical competencies to research the prevalence of different

leadership-styles. On Leadership Styles the researcher chose to anchor the research on the

Full Spectrum of Leadership Theory and explore the Transformative, Transactional and

Passive-Avoidant styles of Leadership to understand which styles of leadership were the

most effective for leaders driving the Sustainability Agenda. The research survey was thus

designed to seek respondent feedback on behaviours that demonstrated the selected four

critical competencies paired with the options of the three different leadership styles that

effective leaders could be assumed to show time after time.

3.3 Research Purpose and Questions

To define the research purpose and questions more coherently after completing the literature review, it felt important to clarify a few key terms that were used in this research and align how these terms are to be understood in the context of this research.

3.3.1 Research Purpose: In addition to what has been defined as the purpose of the research in Introduction earlier, the following may be highlighted as the purpose of the research and clarification offered on what is not the purpose as well:

1. **To study leadership of Sustainability not Sustainable Leadership.** This research is not about how effective a leader is in driving sustainable practices but about how the environmental sustainability related impact of the organization's operations is being ascertained and how effectively they are being managed by the leader in the organization. This research is focused on Sustainability Leadership in that it is more concerned about ensuring that the leader of the business is aware of the organization's carbon footprint and is working towards reducing the impact on the environment.

2. **To select the most critical Leadership competencies for Sustainability leadership:** Based on multiple research studies that have evaluated the competencies needed by business leaders to successfully deliver the sustainability challenge, we can see that the critical competencies of a sustainability leader are that of leading transformation, along with being results-focused ethical, visionary, strategic and people-centered. It is the objective of the researcher to interview business leaders in organizations with a significant sustainability challenge to see

which of these key leadership competencies they highlight as critical. The researcher is of the view that the better we are able to discern the critical competencies, the better the chances that we can select, develop and support the right leaders in this complex arena.

3. **To study the dimensions of Leadership Style and Competencies together, not individually** while exploring a few very relevant organizational cultural archetypes which can be seen at play in the context of the Sustainability Agenda, and which can help or hinder leaders' effectiveness in delivering the Sustainability Agenda. This multi-variate analysis is in order to present the complexity of the real world, where many aspects play out simultaneously and impact one another. A business leaders' beliefs about the state of the climate shape their attitudes and the leader's attitude to sustainability translates to what he or she actually does about it. Beliefs impact attitudes and attitudes translate to actions. Actions are the visible manifestation of beliefs and attitudes. How effectively a leader does things may also depend on their competencies. The leader's effectiveness is therefore a function of the leader's beliefs and attitudes, given shape and force through actions, delivered based on the leader' competencies. This study tries to assess the leadership style (combination of beliefs, attitudes and competencies) based on observed actions. This multi-variate analysis is a more realistic analysis and hence its results likely to be more representative of the real world we live in, compared to the single-factor analysis that we see many times.

4.   To study perceptions of employees in businesses, not use leader's self-assessment.

The objective of tapping into perceptions of employees around the world and

businesses operating in diverse industries from the most carbon intensive to the

least is to understand if there are significant differences in leadership styles and

competencies needed to be most effective when driving the Sustainability Agenda.

The purpose of not getting leaders to do a self-assessment is because of the

expectation that respondents may have exaggerated impressions of their

competencies and how they demonstrate their style while at the same time being

very forgiving of their own lack of progress. It was felt the observed behaviours of

leaders would be a better gauge of what effective business leaders driving the

Sustainability Agenda needed to look like.

3.4 Research Problem and Hypothesis

The problem statement this research tries to answer is what critical leadership

competencies and leadership style enables the business leader to be most effective in

delivering the Sustainability Agenda.

Hypothesis: The hypothesis this researcher worked with is that effective business leaders

leading the Sustainability Agenda are perceived to demonstrate more of Transformational

and Transactional styles of leadership and the critical Leadership competencies of

Transformational Leadership, Ethical Leadership, Strategic Leadership and Team

Leadership.

3.5 Research Phases

Phase 1: Literature Review: This researcher completed an exhaustive review of the literature on Climate Change and Leadership.

Keeping the objectives of the research in mind, this researcher then delved deeper into the literature on leadership theories to find competencies needed to be successful as a business leader leading the Sustainability Agenda. Since critical competencies are the best script for expectations from a job holder, the researcher delved into the search for critical competencies of sustainability leaders to understand the key behavioral expectations from leaders if they had to be effective in driving the Sustainability Agenda. The researcher studied the critical leadership competencies of the Sustainability Agenda established in previous research to crystallize the list to the 'must have' set of four competency groups.

Based on the above, the researcher was able to find strong support from existing research of the leadership theories published in 10 top tier journals between 2000 and 2012 where the 3 top ranked leadership theories selected and studied for their relevance to the subject of Sustainability were 1. Transformational Leadership 2. Strategic and 3. Team Leadership. Of the very few researches done specifically on the leadership competencies for effective leadership of the Sustainability Agenda, the study by researchers Ben Knight from E&Y London and Ben Patterson, Business School of the University of Darvy whose paper 'Behavioural competencies of Sustainability Leaders: An empirical investigation was published in 2017' established 10 critical and 10 prominent behavioural competencies for effective leadership was found to be most relevant. In this paper the three selected areas of Transformational, Strategic and Team leadership feature among the 5 competence

categories, the other 2 being Ethical Leadership and Results Oriented Leadership. Building on this research, Ethical Leadership was selected as the 4th area for exploration. Since the items listed in the paper under Results Oriented Leadership were too generic to be particularly relevant for sustainability leaders, this fifth area was dropped.

Phase 2: Seeking Leader's inputs:

The researcher conducted some 30 in-depth semi-structured interviews with senior business leaders from across industries and geographies to understand the practical challenges of implementing the Sustainability Agenda and the leadership competencies and styles most required for success. It was clear from these interviews that leading the Sustainability Agenda effectively is not business as usual. These interviews reaffirmed that to implement sustainability practices in business, the role of business leaders was key. It reiterated the points that the leaders' competencies to define innovative strategies, set up appropriate organizational structures and processes, define accountability and improve performance by working with and through others, while holding up high standards through their own visible leadership is going to be key to the sustainability challenge. For organizations to cope with the changes brought about by climate change related regulation as well as by increased stakeholder expectation will require doing things differently, and a whole combination of leadership competencies, styles, contextual and cultural factors need to be reckoned with.

Phase 3: Broadening the initial hypothesis:

Based on the rich perspectives from leaders, this researcher refined the initial hypothesis that effective leadership was only a question of having the most relevant

competencies to drive the Sustainability Agenda. The practitioner's viewpoint that the researcher took on to update the hypothesis was that leadership effectiveness was also a question of the right mindset, attitudes and behavioral patterns, contests and cultures, captured by Leadership Styles.

This led the researcher to explore Leadership Styles more deeply and go back to the Literature Review. The attempt was to find answers to what combination of leadership mindsets, attitudes and behavioral patterns, typified in leadership styles would be most effective in leading the Sustainability Agenda. Since the critical competences that had been ascertained were Transformational leadership, Ethical Leadership, Strategic Leadership and Team Leadership, these competencies lent themselves to the Full Range of Leadership model, which allowed the comparison of the Transformational Leadership style to the Transactional Leadership style to the Passive-Avoidant Leadership style. Avolio and Bass's 'full range of leadership' theory is one of the most well established and well researched theories on leadership effectiveness which highlights the different styles of leadership demonstrated by leaders and how this is reflective of their level of engagement and commitment to the task or cause. This theory explores the leadership styles from the perspective of the levels of leader engagement and classifies the three predominant styles as Transformational, Transactional and Passive-Avoidant. To arrive at the view on which leadership styles were most relevant for sustainability leadership, this research built on an insight that had come through from readings as well as the leadership interviews mentioned before – that to get momentum on the Sustainability Agenda, the aspect of getting employees engaged and committed to the agenda, is critical. Yet to the

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researcher's surprise, no studies seem to have been done on the relation between the engagement-based leadership style of leaders of the Sustainability Agenda and the effectiveness of the leader when leading this agenda. Bass and Avolio's Full Range of Leadership model was ideal for studying this aspect since from a practitioner perspective, this researcher could relate to the many instances where leaders had demonstrated one of these three styles when having to deal with this complex topic. This model offered a simple but credible explanation of the typical styles and mindsets leaders demonstrate in business on the topic of sustainability as observed by the researcher in his three decades of work. However, since no research seems to have been done on the effectiveness of leaders based on their leadership styles, this researcher selected this theory to address the gap in research and explore the effectiveness of leaders depending on their style.

The next aspect this researcher wanted to delve into was the critical role of the context within which different leaders' function and which also go on to explain their effectiveness or the lack of it. A few specific contexts based on the challenges of the Sustainability Agenda, namely the extent of the decarbonization challenge faced by the industry or organization the incumbent was part of, and the sustainability related regulatory oversight that applied to it were studied to understand how these might impact the effectiveness of the leader.

The other element by way of context that this researcher, being an HR practitioner, understood well and built into the study was the role of the culture of the organization. The researcher went back to the literature review to review cases and papers which documented how even if all else in terms of leadership, style and context were to be same,

effectiveness of leaders could still vary due to the organizational culture. This led to the refining of the scope of the research that faced with the same challenge to reduce carbon emissions in the same timeframe and by the same quantum, two organizations with equally competent leaders who have the right leadership styles can achieve different results. Based on literature review, the contexts of the cultures of customer focus, people (or employee) focus and execution (or results) focus were selected. In addition, a few cultural contexts that are most relevant for the Sustainability Agenda were selected for the purpose of validation. These included the culture of nurturing new ideas and finding innovative sustainability solutions, the culture of Board support on sustainability and the culture of building external partnership to deliver on the organization's own sustainability goals but also to support the agenda across the ecosystem.

Phase 4: Integrating the dimensions of the study:

Practitioners recognize that leadership is multi-dimensional and that many elements work simultaneously to define effectiveness in reality. Yet the discreet leadership theories and frameworks studied in academics were largely one dimensional, typically studying one dimension of leadership at a time. At a practical level, what makes leadership so challenging is that multiple dimensions collide in reality, and the leader is expected to address the challenges of each dimension almost simultaneously. The need for critical competencies is fundamental for the incumbent of any job and is a precondition for success. However, competent leaders need to be 'in the right place at the right time' to be successful. This translates to the contexts they need to be effective.

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This researcher used this practice-based-insight to move this research from a one-dimensional study to a study of 3 dimensions building on the Leadership Competency categories critical for the Sustainability Agenda, namely

1. Transformational Leadership

2. Ethical Leadership

3. Strategic Leadership

4. Team leadership

Building on the Competencies above, the study attempted to understand how effective leaders are seen to be in driving the Sustainability Agenda, based on their Leadership Styles, namely

1. Transformational Style

2. Transactional Style

3. Passive-Avoidant Style

The study combined the above with the exploration of the context in which the leader is. The contexts include the following:

1. Geography where the leaders are based classified under:

   a) Europe and UK

   b) USA

   c) Australia

   d) Developed Asian country (Singapore, Japan)

   e) Developing Asian country (China, India, etc)

   f) Other Asian country

g)   Others

2.   Organizations' challenge in decarbonization classified based on

a)   Significant carbon footprint

b)   Moderate carbon footprint

c)   Low carbon footprint

3. Leadership Level in terms of seniority namely:

a)   CEO and C-Suite/ Enterprise Leaders

b)   Regional/ Departmental/ Functional Heads

c)   Team Leaders

4. Organizational culture relevant for the Sustainability Agenda, namely the culture of

a)   Customer focus

b)   People (or employee) focus

c)   Execution (or results) focus

d)   Innovation

e)   Board support.

f)   External partnership

In summary this researcher tried to assess the effectiveness of business leaders from the perspective of the most effective leadership styles as demonstrated through the four critical leadership competence areas needed to be successful and the contextual factors that may also explain the variation of their level of effectiveness.

Phase 5: Aligning the Research Hypothesis to the research method

Based on the above, the hypothesis of this research was finalized to read as follows: The research hypothesis is that business leaders who are most effective in leading the Sustainable Agenda in organizations are perceived to demonstrate more of Transformational and Transactional Leadership styles and a few critical leadership competencies. This led to defining the Survey Design.

The specific Sustainability Agenda related challenges of organizations in different industries and countries, is very different, and hence the scope and scale of their Sustainability Agenda is also expected to be very different. This research is not to establish whether the Sustainability Agenda of any organization is adequate, comprehensive or robust but rather to focus on perceptions of what effective Leadership of that agenda looks like. It is to understand general perceptions of professionals who are employees in organizations about the business leader's effectiveness in leading the Sustainability Agenda.

3.6 Defining the Survey Population and Sample

Target population

The survey was administered to 300 mid-career professionals and managers in business organizations in Asia, Europe, North America and Australia working in the companies including those which have a significant challenge wrt decarbonization, a moderate challenge and/or companies which are in the Green, Renewable and Sustainable space. Responses were sought from mid-level managers and mid-career professions in different industries (classified based on the significance of the Decarbonization challenge)

and countries (classified based on awareness of energy transition based on human development index)

Population and Sample

The population for this research were all business leaders in businesses anywhere in the world in any industry. In this context 'business leader' was defined to include people in business organizations in roles that give them formal authority and power over deciding priorities and allocation of resources whether at the organizational or departmental or team level. This definition excluded people in roles that have informal influence but no formal authority over organizational goals. The definition also excluded sustainability roles other than the senior leadership role such as that of a Chief Sustainability Officer. The assumption was that people in roles such as in Sustainability do not decide the priorities and resource allocation of the organization and that there is a need to hold formal leaders to account and that the focus needs to be on formal business leaders who have the prime or shared accountability of the organization's sustainability actions. Since all business big or small have some carbon footprint or some environmental impact in terms of its draw on environmental resources and / or release of environmental wastes, the assumption was that all businesses should have a Sustainability Agenda and hence all businesses were in scope.

The sample selected for the survey was of managers and mid to senior level individual contributors since the chances were higher of this sample having a more well informed view of what leadership of the Sustainability Agenda in business actually looked like.

While the lived experiences of the Senior Leadership of organizations who were tasked with leading the Sustainability Agenda was certainly going to be higher than any other sample, this reseacher chose to not limit the sample to only this propulation. This was based on a realisation while interviewing a number of C Suite leaders at the early part of this research that there was a huge extent of wanting to appear to be doing the right thing. This made them redpond to questions of what they had done in leading the Sustainability Agenda in terms of what the right thing to do would be. It was difficult to get Senior Leadership including CEOs and C Suite executive to stay away from turning the question from an honest reflection of the challenges and needs of their roles to a 'PR speak' on Sustainability. This made it difficult in most cases to get an authentic self reflection on what competencies they had used and what style of leadership they were demonstrating. This group probably felt acutely aware of the expectations of their role and self-assessed the extent of their success as being inadequate and quickly shifted in the interviews from what they had done and what style they had depolyed to be effective to what style 'leaders should deploy'. After almost 30 such interviews, the researcher decided to move away from making the C- Suite the sample for this research.

The propensity of respondents who feel responsbile for the Sustainability Agenda but may have been less than effective in doing their part, to answer the questions in terms of 'should be's made the researcher devise the survey questions to be focused on behaviours rather than beliefs or values. Further, the researcher saw the need to look for 'observed behaviours' rather than on the knowledge of 'right behaviours'.

3.7 Defining the Survey Method

Mode of Administration: The survey was emailed to the sample population or sent via WhatsApp. The message set the context briefly and added a link to a 2.5-minute video where the context of the research was described further for those who wished to understand more before attempting the survey. The message included a request with the link to the Google Forms survey.

Why Self- Reporting was not used as a data collection method.

It can be argued that self-reporting by leaders of their own behaviours could have been more helpful in this research on the lines of several studies which have used self-reporting to collect data (Knight and Paterson, 2018). It is a fair challenge that assessment by others who observed the leader could have been based on a limited number of the leader's actions. It is also a fair challenge that a study based on other's observations of leaders could have a mix of direct observations, anecdotal evidence, hearsay, conjecture and assumptions playing in.

While these are indeed fair challenges, reliance on self-report for the measurement of both dependent and independent variables has also been long challenged in behavioral research. The concerns include the validity of self-declarations. Systematically and yet unknowingly, the participant may distort responses and introduce biases and justifications. In leadership assessments, self-reporting can be quite flawed as most of us suffer from an element of self-deception. The propensity of leaders to be more forgiving of oneself and blame others or external factors for not achieving what they had to, is also known to be high. The findings from the interviews this researcher conducted with C Suite executives

who saw themselves responsible for the Sustainability Agenda in their organizations, convinced this researcher that it would be better to avoid self-ratings and instead get a stakeholder perspective and an outside in view on the issue.

3.8 Designing the Questionnaire

Basis: To ensure the objectives of the research were met, the questionnaire needed to focus on Leadership Styles. The 3 leadership styles in the Full Range Leadership Theory by Bruce J. Avolio and Bernard M. Bass was used as the theoretical underpinning. The MLQ (Multifactor Leadership Questionnaire) which Bass and Avolio built to understand leadership styles was used as a reference. The MLQ5x was studied for this purpose, however it was decided not to use it on account of it being one dimensional in that it only measured the leadership styles. Also, the questions were not quite aligned with the context of the sustainability challenge. Instead, the 3 leadership styles were articulated for each of the 4 key leadership competency areas that had been established as the critical ones for the leadership of the Sustainability Agenda. The questionnaire was therefore designed to test opinions on the frequency of the different Leadership Styles being demonstrated by business leaders who are considered most effective in leading the Sustainability Agenda.

The Leadership Styles demonstrated were as observed through behaviours that are anchored to the critical areas of competence needed. Since it is not possible to study certain aspects of one's Leadership Style, namely the elements of mindset and attitudes, the observed behaviours were taken as the proxy and their best representative. It is very difficult, if not impossible to track every behavior of any leader with a longitudinal study

over many years where the observers and independent variables too remain constant. However, this survey tried to achieve some of these objectives by trying to understand the perceptions of respondents based on their observations of leaders' behaviours over a sustained period.

The other aspect which the questionnaire was designed to capture opinions on included the Geography, Seniority and Industry that leaders who were deemed most effective were from. This was to understand if there was any pattern to indicate the preponderance of leaders in any country, industry or level in the organization. The other element the questionnaire was designed to capture was key aspects of Organizational Culture which could play an enabling role in the leader's effectiveness. The idea was to understand from the observed and lived experiences of respondents what they perceived to be the most effective leadership styles and key enablers of organizational culture when leading the Sustainability Agenda.

To make the behaviours tangible and specific rather than theoretical and vague, questions were all based on what leaders actually need to do. Based on the 4 critical competencies distilled from previous research as being the distinguishing ones for the Sustainability Agenda, 4 situations were selected that leaders would inevitably need to encounter. In each such situation, the 3 options to consider were based one each on the 3 leadership styles being explored. It was acknowledged that leaders may demonstrate more than one and even all styles depending on the situation and their own attitudes and beliefs, hence these were not presented as options to choose from but rather as options to which they could indicate their degree of agreement for every situation.

Variables: The survey questions took the Leadership Competencies (Transformational Leadership, Strategic Leadership, Team Leadership and Ethical Leadership) and the Leadership Styles (Transformational, Transactional and Passive-Avoidant) as the set of independent variables and perceived effectiveness of leaders as the dependent variable. The Contextual Factors -Geography, Seniority, Industry of leaders perceived to be most effective and elements of Organizational Culture that leaders were likely to be supported by, were taken to be independent variables.

3.9 Factoring in Practical Considerations

a. **Time:** Since the respondents were mid to senior level executives in companies, it was assumed they would be busy and have limited time. To ensure they could respond within 10 minutes, the questions in the survey were brought down to 25 with 22 needing ratings on a Likert scale or selection from multiple choices. Only two questions with open text were included to allow participants to add any comments.

b. **Language:** The questionnaire was in English for all geographies except Japan where a Japanese language version was used. The Japanese language version was translated back to English to check that the loss in translation was minimum.

c. **Question Quality Checks:** Questions were tested for clarity, conciseness and use of simple jargon free language. No questions were double-barrelled other than when intended to seek a response on a question with more than one consideration. To ensure constructs such as Leadership Style and Competencies were understood

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easily, questions captured them in terms of observable behaviours. Cronbach's Alpha scores were assessed from small samples to ensure internal consistency of constructs.

d. **Survey Sections:** These questions are grouped into 3 sections – Context, Leadership Style and Organizational Culture.

e. **Instructions:** Clear instructions were provided to help participants complete the survey.

3.10 Pretesting and Piloting

Pretest: A pretest was conducted with 16 participants who fit the target population. Issues identified with the survey design were identified and corrected.

Pilot Study: A pilot study with 25 participants was conducted to test the overall survey process end to end from data collection through to analysis before launching the full survey.

This pretest and pilot phase was very helpful to confirm that the questions covered the range of contexts where the different leadership competencies were called for and the different leadership styles applied. In summary the following were confirmed:

1. that the competence of Transformational Leadership is most required in the context of the Sustainability Agenda when defining the business strategy and business model and building a shared vision around sustainability being an integral part of the business strategy as well as when ensuring that ongoing business priorities (e.g.,

profitability, market growth, etc.,) are not at the exclusion of the Sustainability Agenda.

2. that the competence of Ethical Leadership is most required in the context of the Sustainability Agenda when leaders have to make a choice between upholding high standards of business ethics with respect to environmental sustainability, and working on practical considerations such as near-term profit objective. There are many situations where a trade-off may be necessary. How the leader decides at these moments will decide their commitment to business ethics as seen in the light of the Sustainability Agenda.

3. that the competence of Strategic Leadership is most required in the context of the Sustainability Agenda when leaders have to define the strategic business agenda by building long-term environmental sustainability at its core. If this is done well, it would allow leaders down the line to execute the Sustainability Agenda without feeling they have to do something misaligned with the business strategy.

4. that the competence of Team Leadership is most required in the context of the Sustainability Agenda when leaders need to bring in others with greater expertise or knowledge than they have to build the agenda and deliver it powerfully.

5. that the Style of Transformational Leadership is required for greater progress in the Sustainability Agenda and that this need is across many organizations in many contexts. It needs to be seen though whether the most effective leaders in business today are seen as being Transformational in more situations than not.

6. that while Transactional Leaders are driven by practical considerations such as self-preservation (of their orgnisation and themselves), it may well mirror the reaility of leadership in businesses where Profits remain the dominant reason for existence.

7. that while Passive-Avoidant leaders are not willing to get engaged on this topic either due to practical considerations or a belief that sustainability does not matter or that it is not within their sphere of control or influence, it can be expected that a big segment of leaders today would fall into this category.

3.11 Data Collection

Data Collection Methods: Data was collected using a survey questionnaire with 25 questions of which 12 were multiple choice questions on Leadership Styles that respondents saw most effective leaders displaying. These 12 questions were anchored on 4 critical leadership competencies each demonstrated in terms of the 3 styles of leadership. Respondents rated the different styles on a Likert scale indicating the level of agreement for what the most effective style of leadership is when demonstrating each competency.

The questionnaire was administered across over 1500 respondents in different countries. The survey questionnaire was administered to employee's in the researcher's own company and to employees in the different sister companies in the USA, UK and Europe, Australia, Singapore and Japan. It was also administered to network of HR leaders of global and regional multi-national and and to mid career professionals in regional companies in Asia. Data was collected in 2024 from May 2024 to October 2024.

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3.12 Data Analysis

Data Analysis procedures: Data collected was cleaned up to remove those who did not meet the sampling criteria and responses which demonstrated a pattern of answering that clearly showed their lack of awareness of the subject or their lack of application in answering the question. Data was analyzed using SPSS and relevant insights drawn from the analysis. Descriptive Analysis was presented to explain the participant profile and key findings on perceptions of mindset and behaviours needed for effective leadership of the Sustainability Agenda. Based on key trends, some Prescriptive Analysis was attempted including recommending key considerations when selecting and developing leaders for this area.

The key findings from the descriptive analytics were on the degree to which the participants agreed with statements on the different leadership styles under each of the 4 situations associated with the critical competencies for the leadership role of driving the Sustainability Agenda.

3.13 Research Design Limitations

The key limitation of this research is that we are unable to ascertain with complete certainty all aspects of any Leadership style. This is because Leadership Style which includes mindsets and attitudes of leaders is next to impossible to ascertain with any degree of accuracy. It is only through observed behaviours that one can conclude the likely beliefs and attitudes the leader holds. Though observable behaviours were used to define questions to get respondents views on, there will always remain some element of

uncertainty about how well the behaviours really tell us about the mindset and attitudes of the leaders.

The other limitation of this research is from the uncertainty of knowing whether the responses of any respondent are based on their actual observation, or from assuming what the leader would do in a situation, or from a mix of both. It was assumed the responses would mostly be from a mix of both. This research was therefore a perception study based on everything the respondent has seen, heard and understood about the behaviours of leaders.

The next limitation of the study is that there is no certainty that respondents were thinking only of the most effective leader they had observed in reality and not of the ideal leader they had imagined. It is possible that despite questions being about what leaders actually do and aspects of culture that actually make leaders effective or not, respondents could have answered the questions as they would like leaders to behave in an ideal world and aspects of culture they would ideally like to see in organizations.

In selecting what this researcher understood to be critical among many Leadership Styles and many Leadership Competencies, it is possible that certain styles or competencies were excluded which could have equal or more materiality than the ones selected. A broader set of variables need to be studied for a fuller appreciation of what else may be material.

3.14 Ethics Review

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Ethical considerations. No respondents were asked for any personal data that could identify any individual. There were only 2 questions on participant demographics on the country and industry they worked in, making it impossible to identify participants. These 2 were collected only to get a sense of where responses came from and ascertain if the responses had sufficient representation from different industries and countries. For each finding, the limitations of the research and findings were called out to highlight where further research was necessary. No findings or statements were plagiarized, and care was taken to attribute each statement or finding to their rightful authors.

Informed Consent: Respondents were informed via the invitation email about the objective of the survey being purely for academic purposes and that it was purely optional/ voluntary to participate.

Removing fear and apprehension: The opinions were expected to be based on general experience or observation of leaders involved in the Sustainability Agenda. No opinions were sought on respondent's current company or leaders.

Confidentiality: The note to respondents mentioned upfront the confidentiality and anonymity of respondents' answers, including that no names, personal data including email IDs were to be collected.

Ethical Approval: The ethical approvals were sought from the Project Mentor on behalf of the SSBM review boards

Conclusion: Based on this researcher's practitioner knowledge, the researcher is not aware of any framework to capture both the leadership style and leadership competency

dimensions to simultaneously measure business stakeholders' expectations of effective leaders in driving the Sustainability Agenda. This researcher intends to propose a framework to do this, that is contextualized for leading the sustainable agenda. Being among the first studies on the effectiveness of key styles of leadership and competencies in the context of the Sustainability Agenda, it is hoped that this research will have practical value in industry. In acknowledging that organizational cultures differ, this research also hopes to build into the framework an understanding of the impact that cultures may have on leadership effectiveness.

This researcher believes that such a framework will offer multiple benefits – it will enable organizations to define what good looks like with respect to the leadership of the Sustainability Agenda, assess and select the right leaders to drive the Sustainability Agenda, set the right expectations with them with respect to leadership behaviours and develop them in areas of leadership where they have strengths as well as key gaps. It is hoped that this research will provide a practical guide for selecting and developing leaders who need to drive the Sustainability Agenda in their businesses and that this guide can be used across organizations with varied contexts.
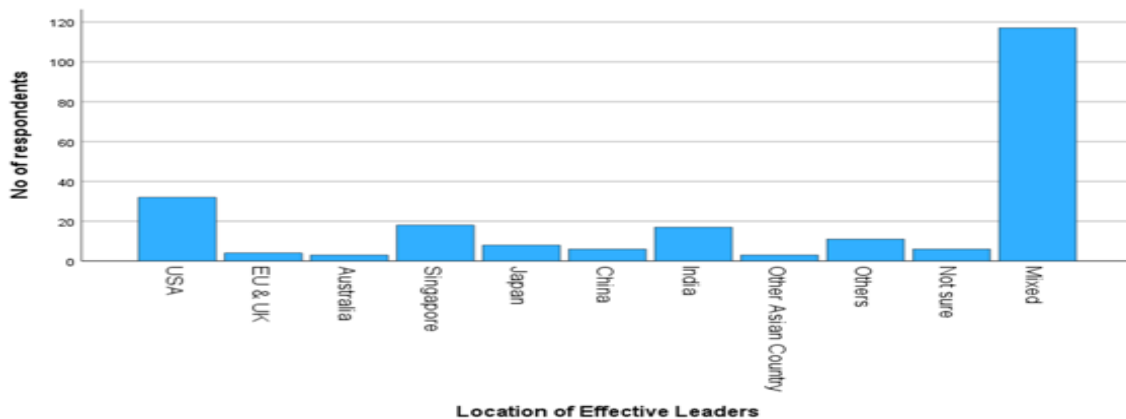
CHAPTER IV:

RESULTS

4.1 Research Questions and Results

Section A: Effective Leader quadrants: This section tries to understand perceptions of respondents on location, industry and level of effective business leaders driving the Sustainability Agenda.

Q1. Where are most effective leaders located (i.e.,country where they work):

Graph 8: Location of most effective leaders driving the Sustainability Agenda

The responses suggest that more than half of respondents (52%) believe effective leaders are from a mix of countries as opposed to being from any one particular. The only countries where respondents saw the proportion of effective leaders to be significant were the USA (14%), India (8%) and Singapore (8%).

Q2. In which type of industry are the most effective leader(s):
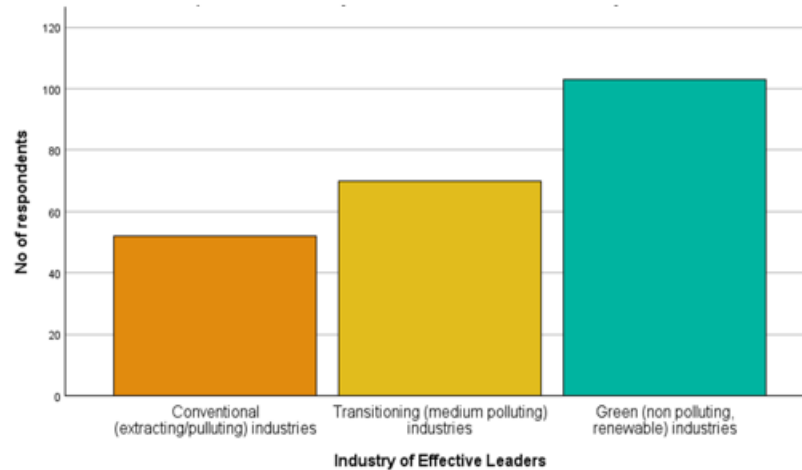
Graph 9: Industry of most effective leaders driving the Sustainability Agenda

The responses suggest that close to half of respondents (46%) believe effective leaders are from the Green or Renewables and/or Non-polluting/ Non-Extarcting industries. About one-third (31%) respondents believe leaders are from Transitioning industries, ie those whose levels of polution or levels of extraction are not among the higest and which are still making significant strides to become green. Interestingly almost a quarter of respondents (23%) see leaders of conventional industries as the most effective leaders driving the Sustainability Agenda.

Q3. At which level in the organization are the most effective leader(s) to be seen
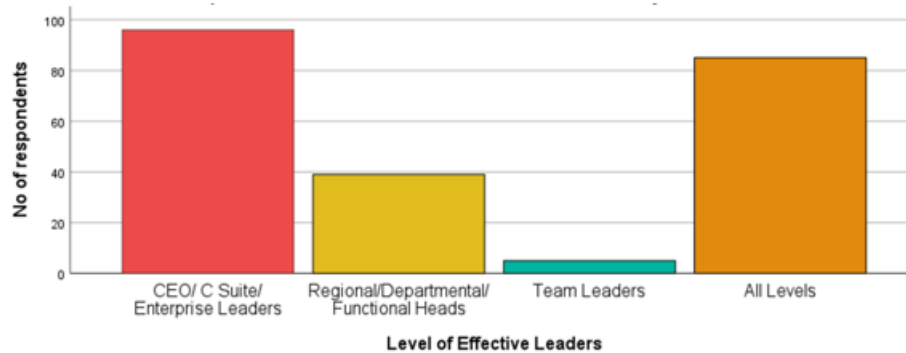
Graph 10: Level of most effective leaders driving the Sustainability Agenda

The responses suggest that almost 43% respondents believe that the most effective leaders in organizations driving the Sustainability Agenda are to be seen at the level of the CEO and / or C Suite or Enterprise leaders. This is logical as this level has the biggest influence.

17% of respondents believe the most effective leaders of the Sustainability Agenda are at the Regional / Departmental or Functional Head level. The possible explanation of this is since this level is most intrumental in operationalising strategy and making things happen, including the Sustainability Agenda.

What is interesting is that 38% of respondents see the most effective leadership of the Sustainability Agenda not being limited to any one level but being mixed with leaders across levels.

Section B:

Since leadership does not occur in a vacuum, the role of a key aspect that influences leadership effectiveness, namely organizational culture, was the second aspect included in the research for an exploration. This section explores how important certain aspects of organizational culture may be the business leader's effectiveness.

Q4. Organizational culture of Board support for the Sustainability Agenda
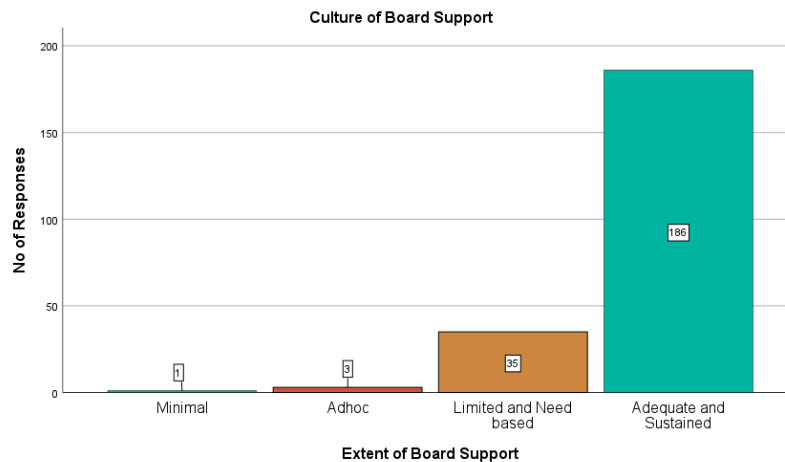
Graph 11: Importance of Board Support for driving the Sustainability Agenda

For business leaders to drive the Sustainability Agenda successfully, the culture of adequate and sustained support from the Board is seen to be very important. 83% respondents Strongly Agreed with this with another 16% agreeing with high support rather than low or no support as important.

Q5. Organizational culture of customer focus (i.e., customer needs drive the products and services offered including sustainable ones).

Culture of Customer Focus
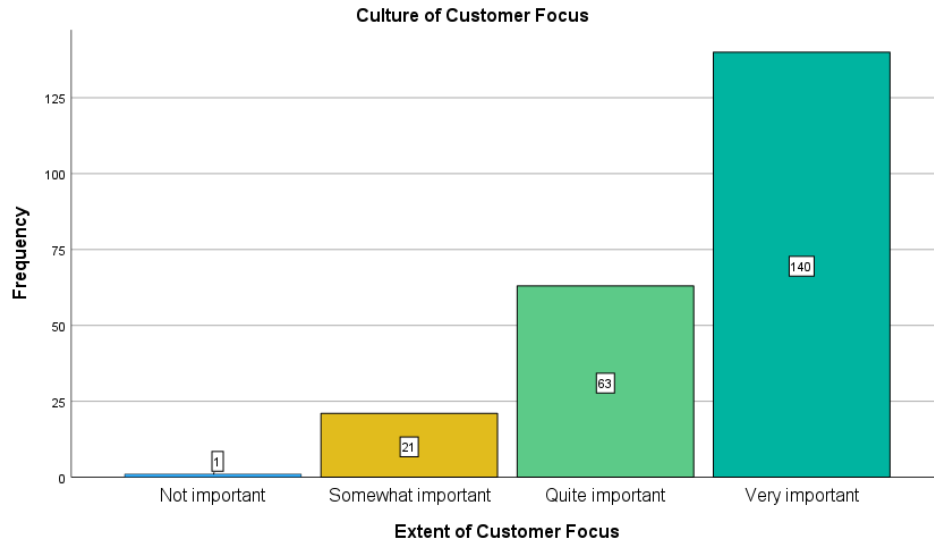
Graph 12: Importance of Customer Focus for driving the Sustainability Agenda

The linkage between the culture of customer focus and business leaders' delivery on the Sustainability Agenda, seems to be a strong one with 63% of respondents Strongly Agreeing with Very Important. 28% of respondents perceive it as Quite Important and another 9.3% perceive it as Somewhat Important. Ultimately, businesses deliver what customers want. Interestingly the responses of 28% of respondents saying it is Quite Important and another 9.3% saying it is Somewhat Important suggests that business leaders may need to go beyond customer's stated needs and perhaps make available products and services that are sustainable/ green even when there is no overt pull.

Q6. Organizational culture of employee focus (e.g., it develops employees for sustainability challenges and opportunities)
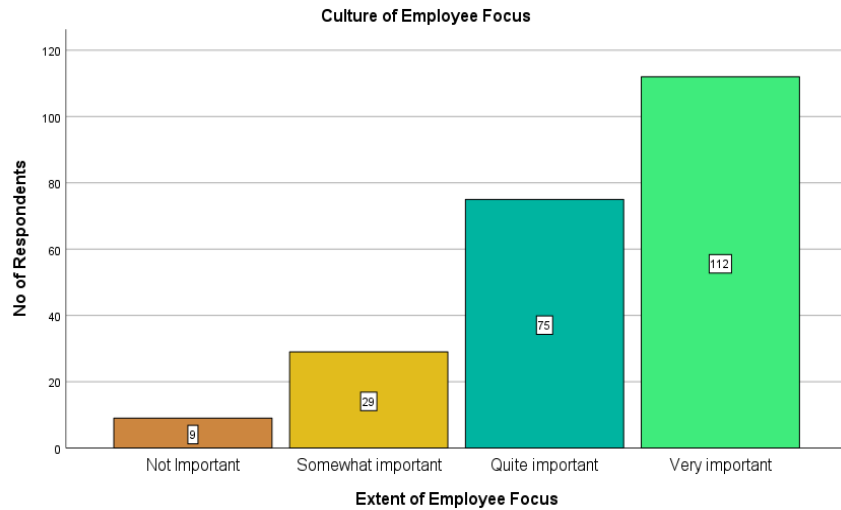

Graph 13: Importance of Employee Focus for driving the Sustainability Agenda

The linkage between the culture of employee focus and the business leaders' delivery on the Sustainability Agenda, in perceived to be a strong one with 61% of respondents Strongly Agreeing with Very Important and 29% with Quite Important. This suggests that leaders of organizations where the culture of developi ng employees to deliver the Sustainability Agenda and to be ready for sustainability challenges and opportunities, as well as acting on employee feedback on sustainability is strong, are perceived to be more effective in driving the Sustainability Agenda.

Q7. Organizational culture of execution focus (e.g., it works on delivering commitments including on sustainability)
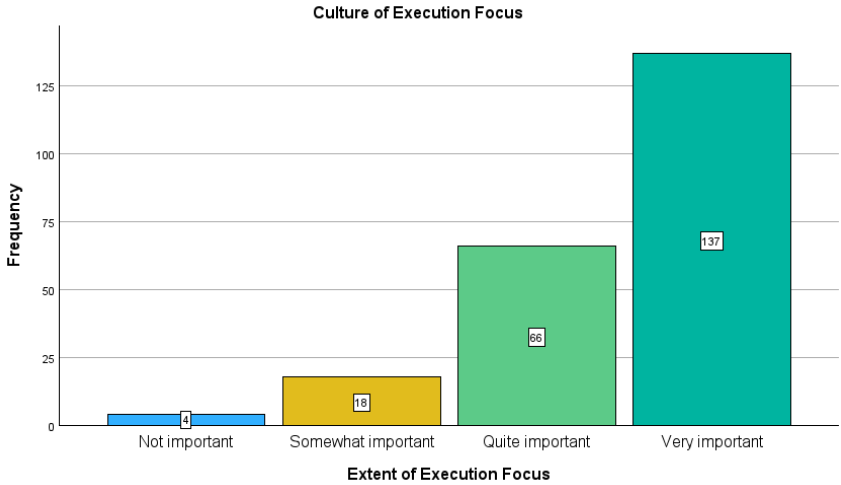
Graph 14: Extent of Execution Focus needed for driving the Sustainability Agenda

The linkage between the culture of a culture of execution and business leaders' delivery on the Sustainability Agenda, seems to be perceived by respondents to be a strong one with 61% of respondents Strongly Agreeing with it being Very Important and 29% with Quite Important. This suggests that leaders of organizations where the culture of execution is strong, are likely to be more effective in driving the Sustainability Agenda.

Q8. Organizational culture of experimentation and innovation (e.g., it innovates constantly on sustainability solutions)
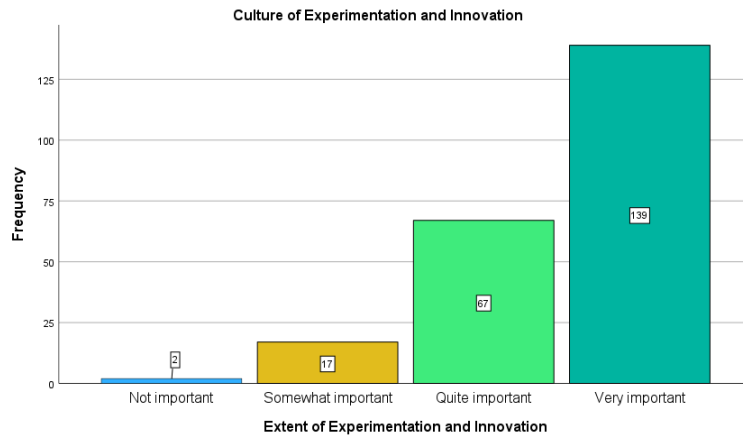
Graph 15: Importance of Experimentation for driving the Sustainability Agenda

The linkage between the culture of experimentation and innovation, and business leaders' delivery on the Sustainability Agenda, seems to be a strong one with 62% of respondents Strongly Agreeing with Very Important and 30% with Quite Important. This suggests that leaders of organizations where the culture of experimentation and innovation are strong, are likely to be more effective in driving the Sustainability Agenda.

Q9. Organizational culture of building partnerships (e.g., it works with different external parties on sustainability topics)

Graph 16: Importance of Partnerships for driving the Sustainability Agenda

Based on the responses, it seems respondents perceive a strong linkage between the culture of partnerships and business leaders' delivery on the Sustainability Agenda, with 51% of respondents Strongly Agreeing that partnerships are Very Important and 38% saying it is Quite Important. This suggests that leaders of organizations where the culture of partnerships is strong, are likely to be more effective in driving the Sustainability Agenda.
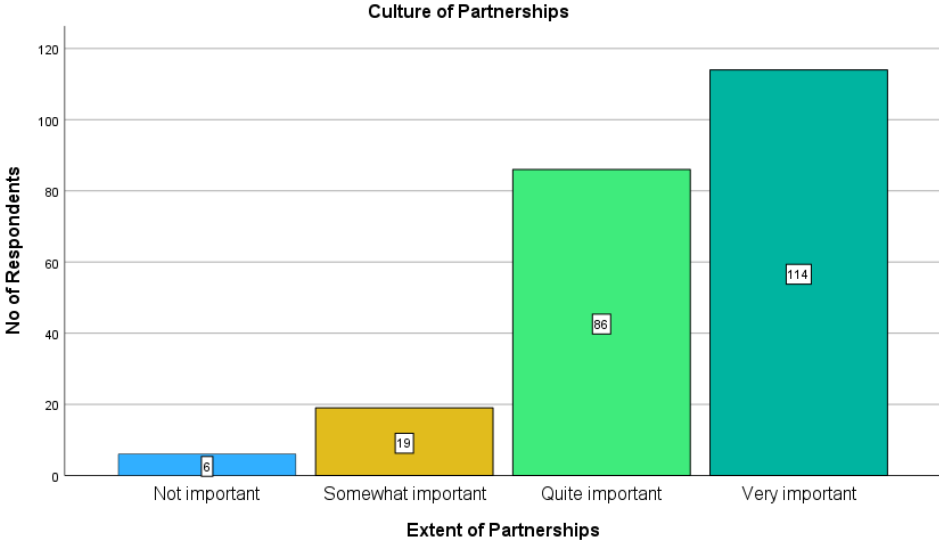
Q10. Effective leaders transform the organization by integrating environmental sustainability into the business strategy and business model and activities and by visibly building shared vision.
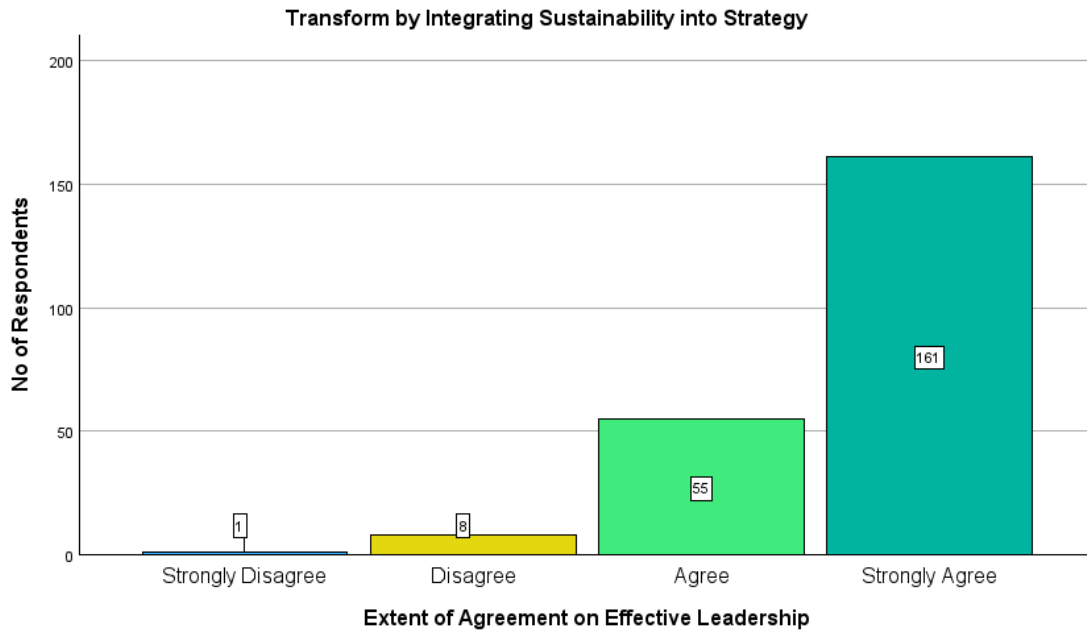
Graph 17: Agreement on Effectiveness of Leaders who integrate Sustainability into Strategy and build Shared Vision

Respondents perceive a very strong linkage between business leaders' effectiveness on the Sustainability Agenda and their ability to transform the organizational culture by integrating sustainability into the business strategy and business model and build a shared vision, with 72% of respondents Strongly Agreeing and another 24% Agreeing. 4.4% Disagree that there is a linkage.

Q11. Effective leaders actively engage on core business priorities (e.g., profitability, market growth, etc.,) and manage essential environmental sustainability topics (such as sustainability reporting) as needed.
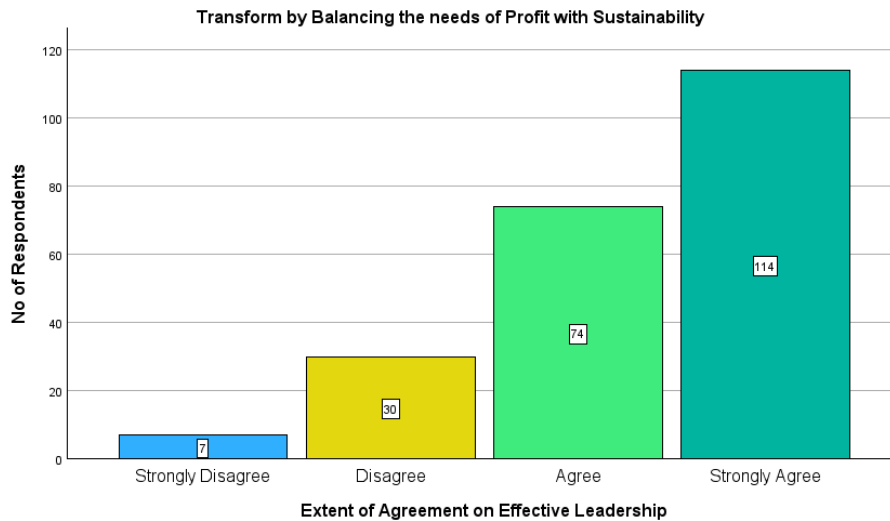
Graph 18: Agreement on Effectiveness of Leaders who balance Profitability with Sustainability

The linkage between business leaders' effectiveness in being transformational by actively engaging on core business priorities while managing essential Sustainability Agenda actions ie using a strategy of maintaining the balance between Profitability and Sustainability seems very strong with 50% of respondents saying they Strongly Agreeing and another 33% with Agree. 16% Disagreed. A 33% not choosing Strongly Agree and another 16% either Disagreeing suggests that either respondents perceive a balance is not seen often or perceive that making trade offs between profits and sustainability is not seen as transformational.

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Q12. Effective leaders prioritize only critical business topics that are linked to current profitability.
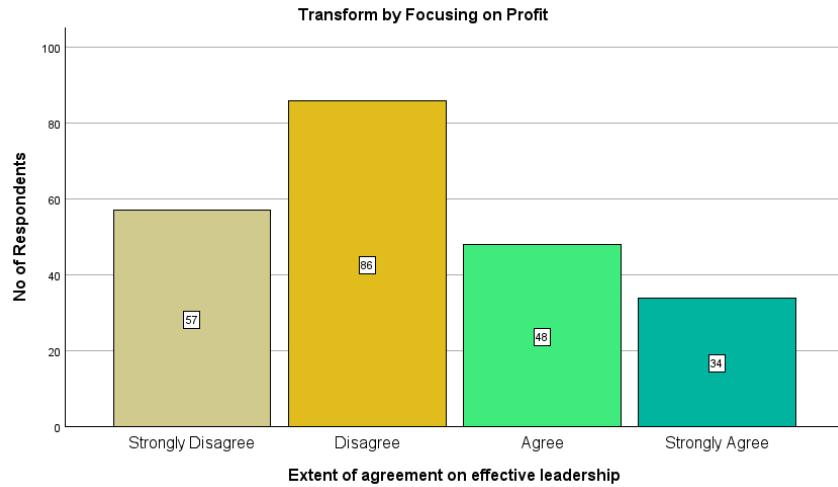
Graph 19: Agreement on Effectiveness of Leaders who focus on Profitability

One fourth of respondents Strongly Disagreed with the statement that effective leaders prioritize only critical business topics that are linked to current profitability. Another 38% Disagreed even if less strongly. It is interesting that the single point focus on profits and the leader's drive to transform the organization to a profitability focused one does not seem to be perceived as an action of effective leadership. It is also interesting that 15% of respondents strongly agree that effective leaders prioritize only critical business topics that are linked to current profitability, and 21% agree, suggesting that these respondents have a different perspective on the issue. This perspective needs to be understood better.

Q13. Effective leaders uphold high standards of business ethics with respect to environmental sustainability, going beyond practical concerns such as near-term profit objective
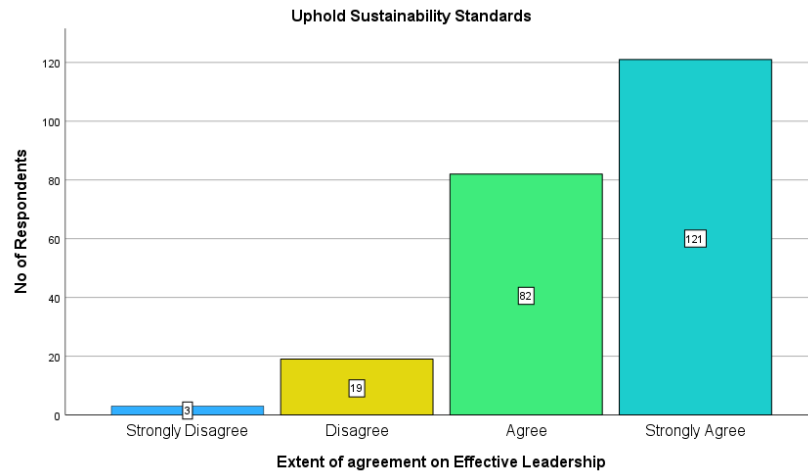
Graph 20: Agreement on Effectiveness of Leaders who uphold ethical standards

The overwheming majority of respondents (92%) agree that ethical standards are important to uphold when it comes to advancing the Sustainability Agenda in businesses. There seems to be strong support for the view that effective business leaders need to go beyond near term profit objectives if they have to effectively lead the sustainability challenge.with 54% Strongly Agreeing .

Q14. Effective leaders do what is practical and ethical with respect to environmental sustainability
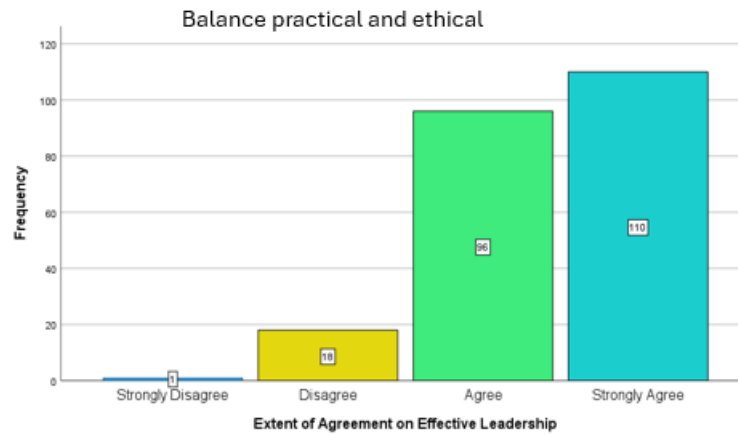
Graph 21: Agreement on Effectiveness of Leaders who balance practical and ethical considerations

Respondents scores suggests strong support for the view that effective business leaders balance Practical and Ethical standards, with 43% respondents Agreeing, and another 49% Agreeing Strongly. Practically 92% responses being in agreement suggests the strong perception that effective leadership is about making that difficult balance between the here-and-now and the future. It is the acknowledgement that neither being just practical and hard nosed about profit is what can be called effective. Nor is it that simply holding unrealistic standards without the acknowledgement of the reality of profits in the business is effective leadership. The strong endorsement suggests that leaders need to balance between the profit vs environmental agenda.

Q15. Effective leaders focus on core deliverables such as profit keeping ethical dilemmas on environmental sustainability aside.
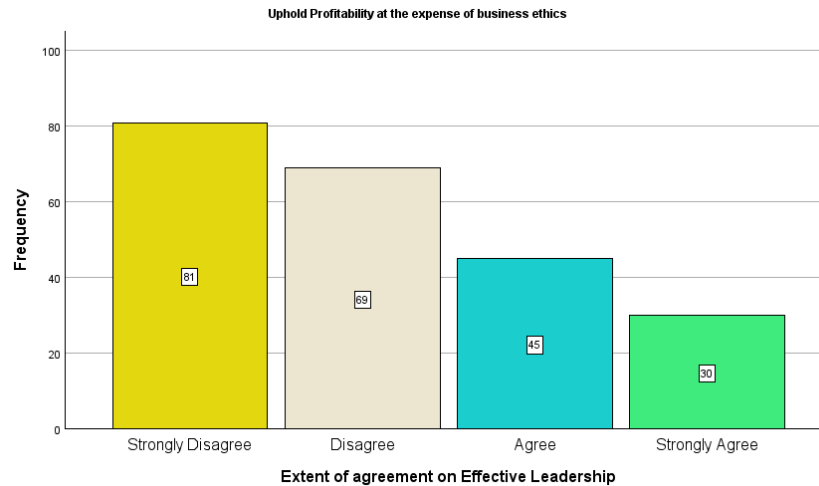
Graph 22: Agreement on Effectiveness of Leaders who prioritize profitability over ethics

There seems to be a strong view that keeping ethical dilemmas aside is not a recipe for leadership of the Sustainability Agenda with 67% disagreeing or strongly disagreeing with a view that effective leaders should ignore ethical dilemmas.

It is interesting to see how scores of respondents change from the response to the previous two questions when the question is worded around ethical dilemmas. From around 10% in previous two questions disagreeing that sustainability leadership requires leaders to uphold ethical standards and do a balancing with profitability, that increases to about 33% when the question is in terms of ethical dilemmas.

Q16. Effective leaders define/implement the strategic business agenda by building long-term environmental sustainability at its core.
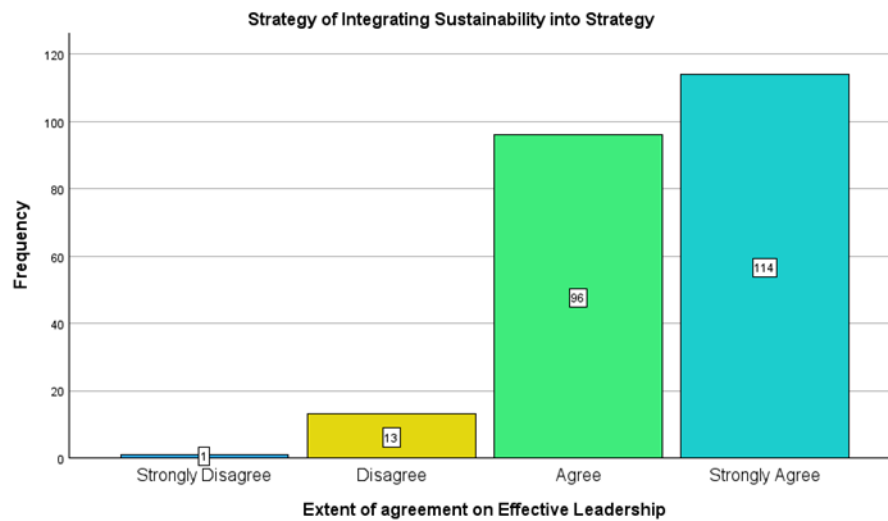
Graph 23: Agreement on Effectiveness of Leaders who build sustainability into the business strategy

51% Strongly Agreed and another 43% Agreed with the statement that Effective Leaders define and /or implement the strategic business agenda by building long-term environmental sustainability at its core. This shows that respondents perceive a very strong alignment on the role effective leaders play in defining or implementing the strategic business agenda and that the agenda necessarily includes environmental sustainability at its core. Building the business for the long term requires sustainability to be a key consideration and 94% agreeing or strongly agreeing makes it a very clear message. This also reconfirms the view that 95% of respondents agreed with in Q10, where the emphasis was on the leaders' focus on transformation.

Q17. Effective leaders define/implement the strategic business plan by addressing current environmental sustainability requirements/ mandates
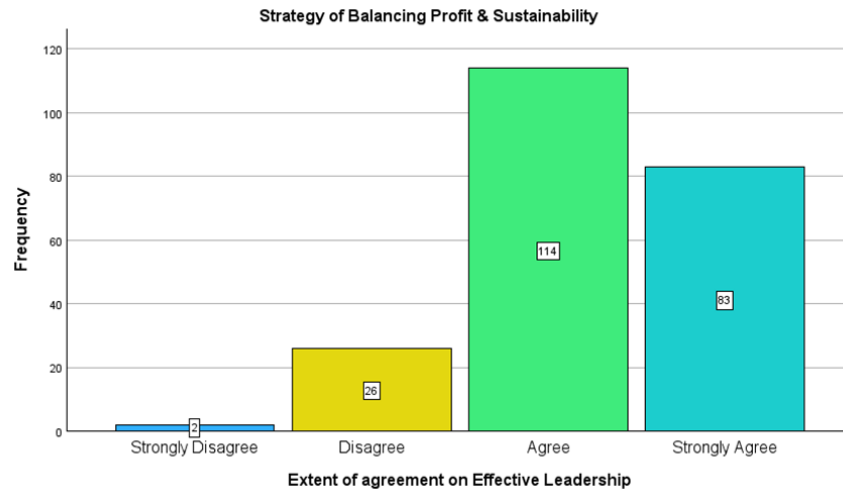
Graph 24: Effectiveness of Leaders whose strategic plan is limited to addressing current sustainability mandates

With 50% agreeing and 37% Strongly Agreeing, the perception is very strong that effective leaders define the strategic business plan and / or implement it not by ignoring the prevailing environmental sustainability requirements / mandates but by addressing them. This is a strategy of balancing profits with sustainability. This score suggests the need to balance sustainability and business actions to the extent of postponing or avoiding some sustainability decisions. This is understandable since most organizations which want to do the right things wrt sustainability also realise that it is not easy to focus on sustainability in businesses without compromising with the profit objective and disenchanting shareholders, bringing the decisions of the leadership under challenge.

Q18. Effective leaders postpone or avoid including environmental sustainability aspects in business strategy/ actions*
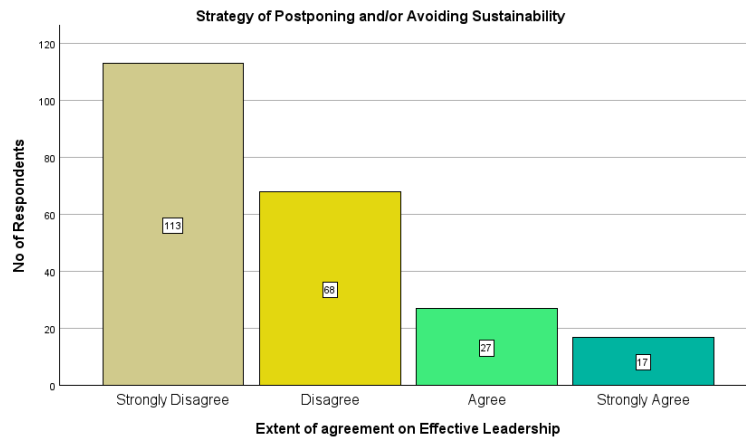
Graph 25: Agreement on Effectiveness of Leaders who do not include sustainability in strategy

50% Strongly disagreed with the statement that effective leaders define/implement the strategic business plan by addressing current environmental sustainability requirements/ mandates. Another 30% Disagreed even if less strongly. There seems to be overwhelming perception that effective leaders cannot only focus on sustainability requirements and mandates by the government. This clearly highlights that employees observe effective leaders going far beyond sustainability mandates and that simply delivering on mandatory reporting and / or sustainability efforts does not qualify as effective leadership.

Q19. Effective leaders involve the team fully in co-creating and delivering the organization's environmental Sustainability Agenda.
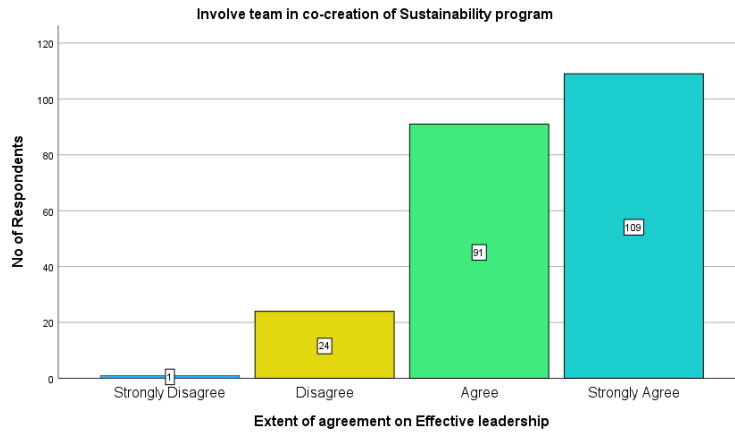
Graph 26: Agreement on Effectiveness of Leaders who include team fully in the Sustainability Agenda

There seems to be overwhelming agreement with a view that effective leaders involve the team fully in co-creating and delivering the Sustainability Agenda. Less than 12% disagreed with this view. This is understandable since the delivery of the Sustainability Agenda requires all hands on deck. Employees at all levels need to be engaged on the aspirations of their leaders on the specfic sustainability challenges they need to take on. Leaders who are able to engage all and translated them to goals specific for the different roles and parts of the organisation are seen to be effective leaders of the Sustainability Agenda.

Q20. Effective leaders involve the team to the extent possible in the organization's environmental Sustainability Agenda and progress updates.
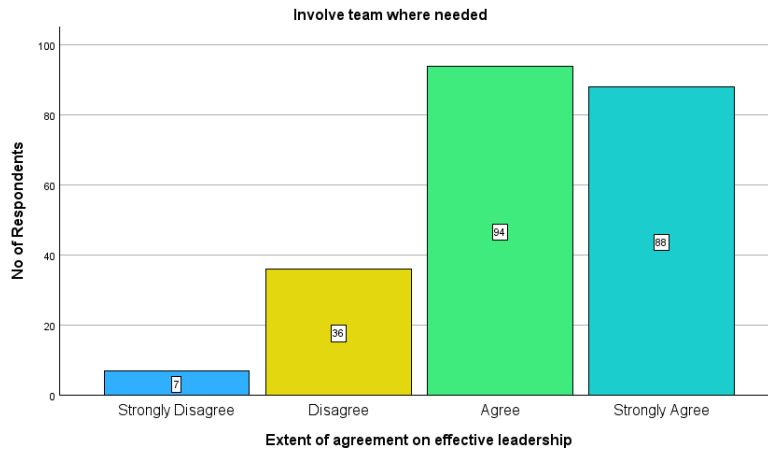
Graph 27: Agreement on Effectiveness of Leaders who include team where possible in the Sustainability Agenda

There seems to be very strong agreement with a view that effective leaders involve the team to the extent possible in the Sustainability Agenda and progress updates. Less than 20% disagreed with this view. This is a less strong endorsement that the previous question that effective leaders involve the team fully in the sustainability strategy and delivery. Perhaps respondents see the involvement in all aspects being constrained by the reality of the practical opportunity of engaging them as opposed to being limited by the belief that teams do not need to know everything about the strategy or implementation plan. This topic may need to be researched further.

Q21. Effective leaders do not involve the team in environmental sustainability topics.
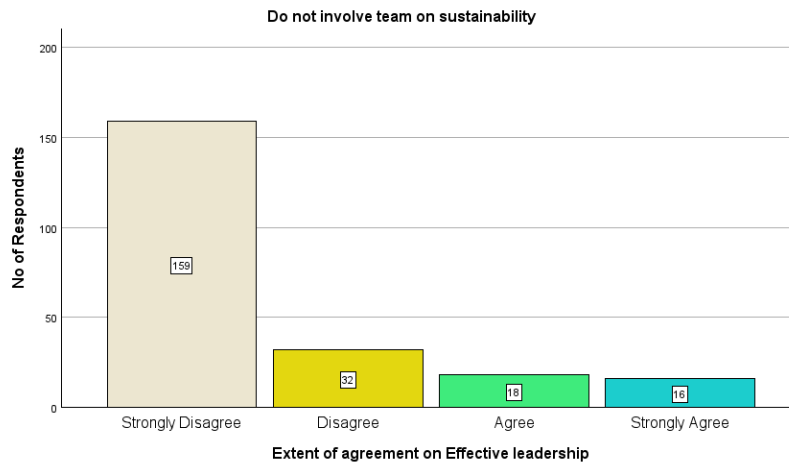
Graph 28: Agreement on Effectiveness of Leaders who do not include team in the Sustainability Agenda

There seems to be overwhelming disagreement with a view that effective leaders do not involve the team in the Sustainability Agenda. Less than 15% agreed with this view. This is understandable since the Sustainability Agenda is often complex and requires actions at all levels and by different functions. Leaders who tend to see this as the responsibility of the Sustainability Team alone or of those who have cetain sustainability KPIs often miss the point that this requires a movement rather than ticking the box to do the bare minimum. Leaders who demonstrate that empployees need to do the 'real work' and that Sustainability aspects need to be kept away from them who may otherwise be distracted, are seen to not be effective leaders in most cases.

Respondent's Demographics:

The only data collected on respondents was the country they lived in and the industry they were in. Due to Singapore being a global and Asia-Pacific head office for many companies and the researcher's own company's global headquarter being in Singapore, the majority of responses (43% of respondents) were collected from Singapore. 22% of respondents were from India. The percent of other respondents were in single digit.
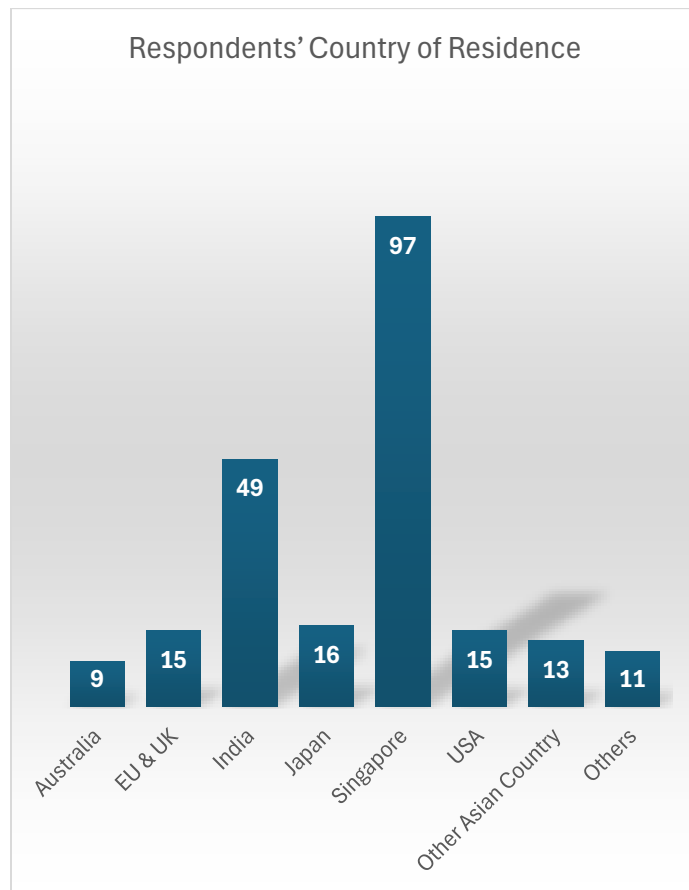
Graph 29: Respondents' country of Residence

The Industry classification of Respondents was based on carbon intensity and decarbonization challenge. 33% of respondents were from Conventional industries, 25% from Renewable industries, 22% from Transitional industries and 20% who did not identify with either of these classifications.
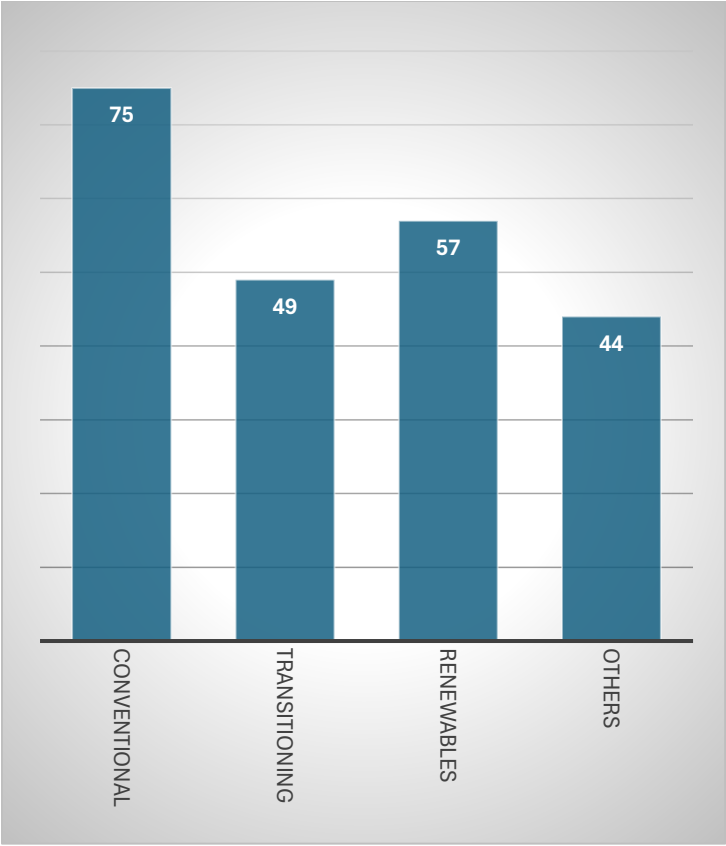
Graph 30: Current industry Respondents work in

4.2 Statistical Analysis

4.2.1. The following codes were used for the statistical analysis in this research:

CBS: Culture of Board Support for the Sustainability Agenda

CCF: Culture of Customer Focus

CEF: Culture of Employee Focus

CXF: Culture of Execution Focus

CIF: Culture of Innovation Focus

CPF: Culture of Partnership Focus

TLS: Transformational Leadership Style

RLS: Transactional Leadership Style

PLS: Passive Avoidant Leadership Style

TCTS: Transformational Leadership Competency with Transformational Leadership Style

TCRS: Transformational Leadership Competency with Transactional Leadership Style

TCPS: Transformational Leadership Competency with Passive-Avoidant Leadership Style

ECTS: Ethical Leadership Competency with Transformational Leadership Style

ECRS: Ethical Leadership Competency with Transactional Leadership Style

ECPS: Ethical Leadership Competency with Passive Avoidant Leadership Style

SCTS: Strategic Leadership Competency with Transformational Leadership Style

SCRS: Strategic Leadership Competency with Transactional Leadership Style

SCPS: Strategic Leadership Competency with Passive Avoidant Leadership Style

MCTS: Team Leadership Competency with Transformational Leadership Style

MCRS: Team Leadership Competency with Transactional Leadership Style

MCPS: Team Leadership Competency with Passive Avoidant Leadership Style

4.3 Cronbach's Alpha

To test the Hypothesis, Cronbach's Alpha was calculated for these constructs of the study in order to establish the internal consistency of the constructs. The key constructs of the study are Key elements of Organizational culture, Transactional Style, Transformational Style and the Passive Avoidant Style

Table 2: Cronbach's Alpha Scores of key constructs

Construct Categories	Number of Items	Cronbach's Alpha
Elements of Culture (CBS, CCF, CEF, CXF, CIF, CFP)	6	0.713
Transformational Leadership Style (TLS)	4	0.654
Transactional Leadership Style (RLS)	4	0.568
Passive Avoidant Leadership Style (PLS)	4	0.794

Cronbach's Alpha score of the 6 elements of Culture is 0.713 which suggests good internal consistency.

Cronbach's Alpha score of the 4 items of Transformational Style is 0.654 which suggests acceptable internal consistency.

Cronbach's Alpha score of the 4 items of Transactional Style is 0.568 which suggests acceptable internal consistency.

Cronbach's Alpha score of the 4 items of Passive Avoidant Style is 0.794 which suggests very good internal consistency.

4.4 Mean, Standard Deviation and Variance Analysis:

4.4.1: Scores of Perceptions of Effective Leadership among leaders demonstrating

Transformational Leadership Style with the 4 key Leadership Competencies

Table 3: Effectiveness Scores of Leaders with Transformational Style and 4 critical
Competencies

	N	Mean	Std. Deviation	Variance
TCTS	225	3.671	.56562	.320
ECTS	225	3.4267	.70407	.496
SCTS	224	3.4420	.62549	.391
MCTS	225	3.3689	.68914	.475

4.4.1.1: Interpretation of Scores of perceived effectiveness of leaders with

Transformational Leadership Competency with Transformational Leadership Style:

The Mean of 3.6711 and Standard Deviation of 0.56562 suggests responses are

relatively consistent. Given a scale of 1-4, this indicates low variability in how

respondents perceived that the most effective leaders driving the Sustainability Agenda

have this combination of Transformational Competency and Transformational Leadership

Style. The low variance score of 0.32 also indicated a high level of agreement among

respondents.

4.4.1.2: Interpretation of Scores of perceived effectiveness of leaders with Ethical

Leadership Competency with Transformational Leadership Style:

The Mean of 3.4267 and Standard Deviation of 0.70407 suggests that there is

slightly more variability compared to Transformational Leadership Competency

suggesting that respondents have more diverse opinions on how the most effective leaders demonstrate transformational leadership style when managing ethical dilemmas in business in prioritizing the Sustainability Agenda. The moderate variance score of 0.496 also suggests a little more variation in views.

4.4.1.3: Interpretation of Scores of perceived effectiveness of leaders with Strategic Leadership Competency with Transformational Leadership Style:

The Mean of 3.4420 and Standard Deviation of 0.62549 means that respondents have moderately consistent views that the most effective leaders broadly demonstrate strategic leadership competency when they use the transformational leadership style. Responses are largely within ±0.62549 of the mean confirming that perceptions are largely similar. The Variance score of 0.391 suggests some variation in views but without any significant difference from the mean.

4.4.1.4: Interpretation of Scores of perceived effectiveness of leaders with Team Leadership Competency with Transformational Leadership Style:

The Mean of 3.3689 and Standard Deviation of 0.68914 means that there is more variability in opinions compared to Transformational and Strategic Leadership competency but lower compared to Ethical Leadership competency. There us moderate diversity in how respondents perceive the most effective leaders involving the team. The moderate variance score of 0.475 confirms the same.

In summary, perceptions of respondents on Transformational Leadership Style are that this style is seen amongst most effective leaders driving the Sustainability Agenda and

these scores are largely consistent as confirmed by the Standard Deviations and Variance scores across all four leadership competencies.

4.4.2: Scores of Perceptions of Effective Leadership among leaders demonstrating Transactional Leadership Style with the 4 key Leadership Competencies

Table 4: Effectiveness of Leaders with Transactional Style and 4 critical Competencies

	N	Mean	Std. Deviation	Variance
TCRS	225	3.3111	.81892	.671
ECRS	225	3.4000	.65465	.429
SCRS	225	3.2356	.68307	.467
MCRS	225	3.1689	.80618	.650

4.4.2.1: Interpretation of Scores of perceived effectiveness of leaders with Transformational Competency with Transactional Style: The Mean of 3.311 suggests respondents generally have high levels of agreement but the high Standard Deviation of 0.81892 means that respondents have diverse opinions on most effective leaders who have Transformational Competency but demonstrate Transactional Leadership Style. The relatively large Variance score of 0.671 shows again that responses have different perspectives on this.

4.4.2.2: Interpretation of Scores of perceived effectiveness of leaders with Ethical Competency with Transactional Style: The Mean of 3.4 suggests respondents have high levels of agreement. The moderately high Standard Deviation of 0.655 means that

respondents have somewhat consistent views on most effective leaders who have Ethical Competency but demonstrate Transactional Leadership Style. The relatively small Variance score of 0.429 shows that respondent's perspectives vary but not significantly on this.

4.4.2.3: Interpretation of Scores of perceived effectiveness of leaders with Strategic Competency with Transactional Style: The Mean of 3.2356 suggests respondents have quite high levels of agreement. The moderately high Standard Deviation of 0.68307 means that respondents have somewhat consistent views on most effective leaders who have Strategic Competency but demonstrate Transactional Leadership Style. The relatively small Variance score of 0.467 shows that responses have quite aligned perspectives on this.

4.4.2.4: Interpretation of Scores of perceived effectiveness of leaders with Team Competency with Transactional Style: The Mean of 3.1689 suggests respondents have quite high levels of agreement. The high Standard Deviation of 0.80618 means that respondents have different views on most effective leaders who have Team Competency but demonstrate Transactional Leadership Style. The rather high Variance score of 0.650 shows that responses perspectives on this are rather different.

In summary, perceptions of respondents on Transactional Leadership Style are that this style is seen to a great extent amongst most effective leaders driving the Sustainability Agenda but the moderate to high scores of Standard Deviations and Variance scores across all four leadership competencies suggest that the leader's consistency is probably in doubt in the minds of respondents. This is in line with this researcher's understanding that

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the Transactional Leader is perceived to be inconsistent in driving of the Sustainability

Agenda as they work on aspects of the agenda in ways that they consider most practical

and convenient.

4.4.3: Scores of Perceptions of Effective Leadership among leaders demonstrating Passive

Avoidant Leadership Style in the 4 key Leadership Competencies

Table 5: Effectiveness Scores of Leaders with Passive Avoidant Style and 4 critical
Competencies

	N	Mean	Std. Deviation	Variance
TCPS	225	2.2622	1.00341	1.007
ECPS	225	2.1067	1.04249	1.087
SCPS	225	1.7689	.93537	.875
MCPS	225	1.5156	.91660	.840

4.4.3.1: Interpretation of Scores of perceived effectiveness of leaders with

Transformational Competency with Passive Avoidant Style: The Mean of 2.2622 suggests

respondents have low levels of agreement. In addition, the high Standard Deviation of

1.00341 means that respondents have very diverse opinions on most effective leaders who

have Transformational Competency but demonstrate Passive Avoidant Leadership Style.

The large Variance score of 1.007 shows that respondents have different perspectives.

4.4.3.2: Interpretation of Scores of perceived effectiveness of leaders with Ethical

Competency with Passive Avoidant Style: The Mean of 2.1067 suggests respondents have

low levels of agreement. In addition, the high Standard Deviation of 1.04249 means that

respondents have very diverse opinions on most effective leaders who have Ethical

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Competency but demonstrate Passive Avoidant Leadership Style. The large Variance score of .875 shows again that respondents have different perspectives on this.

4.4.3.3: Interpretation of Scores of perceived effectiveness of leaders with Strategic Competency with Passive Avoidant Style: The Mean of 2.1067 suggests respondents have low levels of agreement. In addition, the high Standard Deviation of 0.93537 means that respondents have very diverse opinions on most effective leaders who have Strategic Competency but demonstrate Passive Avoidant Leadership Style. The large Variance score of .875 shows again that respondents have different perspectives on this.

4.4.3.4: Interpretation of Scores of perceived effectiveness of leaders with Team Competency with Passive Avoidant Style: The Mean of 1.5156 suggests respondents have strong disagreement. In addition, the high Standard Deviation of 0.9166 means that respondents have very diverse opinions on most effective leaders who have Team Competency but demonstrate Passive Avoidant Leadership Style. The large Variance score of .840 shows again that there is diverge in the views of respondents on this.

In summary, perceptions of respondents on Passive Avoidant Leadership Style are that this style is seen least amongst most effective leaders driving the Sustainability Agenda.

Correlation analysis would be done between the Transformational/ Transactional Leadership and the Leadership Effectiveness scores of leaders with these styles and the 4 leadership competencies. No such correlation analysis is intended for Passive Avoidant style as it is not perceived to be an effective style by the majority.

4.5 Correlation and Significance Analysis:

4.5.1: Correlation of the perceived effectiveness of the leader with Transformational

Leadership style and 4 Leadership competencies:

Table 6: Correlation of Effectiveness of Leaders with Transformational Style and 4
Competencies

		TCTS	ECTS	SCTS	MCTS	TFLES
TCTS	Pearson Correlation	1	.231[**]	.376[**]	.255[**]	.628[**]
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	225	225	224	225	224
ECTS	Pearson Correlation	.231[**]	1	.423[**]	.281[**]	.712[**]
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	225	225	224	225	224
SCTS	Pearson Correlation	.376[**]	.423[**]	1	.377[**]	.768[**]
	Sig. (2-tailed)	<.001	<.001		<.001	<.001
	N	224	224	224	224	224
MCTS	Pearson Correlation	.255[**]	.281[**]	.377[**]	1	.698[**]
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	225	225	224	225	224
TFLES	Pearson Correlation	.628[**]	.712[**]	.768[**]	.698[**]	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	224	224	224	224	224
**. Correlation is significant at the 0.01 level (2-tailed).						

.628**
TFLES: Transformational Leaders Effectiveness Score is a sum of the scores on

effectiveness of leaders demonstrating the 4 leadership competencies in the

Transformational Style.

4.5.1.1 Correlations of Transformational Leaders Effectiveness Score (TFLES) with the combination of 4 Leadership Competencies (TC, EC, SC and MC) and Transformational Leadership Style (TS):

a)   Correlation Coefficient of TFLES and TCTS is .628, is a Strong positive correlation. The p<.001 suggests TCTS has a significant impact on TRLES.

b)   Correlation Coefficient of TFLES and ECTS is .712 making it a very strong positive correlation. The p<.001 suggests it is a very significant score

c)   Correlation Coefficient of TFLES and SCTS is .768, making it a very strong positive correlation. The p<.001 making Strategic Competency is the most critical predictor of effectiveness of the Transformational Leader.

d)   Correlation Coefficient of TFLES and MCTS is .698, a very strong correlation. The p<.001 suggests strong significance suggesting Team Competency plays an important role in explaining leadership effectiveness.

Interpretation:

- The scores suggest these leadership competencies are very important in explaining perceived leadership effectiveness of the leader who has a Transformational Leadership style. It supports the inclusion of these variables in a predictive regression model.

- Strategic Competency has the strongest correlation with the Effectiveness Score of the Transformational Leader followed by Ethical Competency and Team Competency

4.5.1.2: Correlations of Transactional Leaders Effectiveness Score (TRLES) with the combination of 4 Leadership Competencies (TC, EC, SC and MC) and Transactional Leadership Style (RS):

Table 7: Correlation of Effectiveness of Leaders with Transactional Style and 4 Competencies

		TCRS	ECRS	SCRS	MCRS	TRLES
TCRS	Pearson Correlation	1	.241**	.212**	.076	.640**
	Sig. (2-tailed)		<.001	.001	.259	<.001
	N	225	225	225	225	225
ECRS	Pearson Correlation	.241**	1	.258**	.176**	.633**
	Sig. (2-tailed)	<.001		<.001	.008	<.001
	N	225	225	225	225	225
SCRS	Pearson Correlation	.212**	.258**	1	.171*	.629**
	Sig. (2-tailed)	.001	<.001		.010	<.001
	N	225	225	225	225	225
MCRS	Pearson Correlation	.076	.176**	.171*	1	.595**
	Sig. (2-tailed)	.259	.008	.010		<.001
	N	225	225	225	225	225
TRLES	Pearson Correlation	.640**	.633**	.629**	.595**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	225	225	225	225	225

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

TRLES: Transformational Leaders Effectiveness Score is a sum of the scores on effectiveness of leaders demonstrating the 4 leadership competencies in the Transactional Style.

4.5.2.1 Correlations of Transactional Leaders Effectiveness Score (TRLES) with the combination of 4 Leadership Competencies (TC, EC, SC and MC) and Transactional Leadership Style (RS):

a)   Correlation Coefficient of TRLES and TCRS at .640, is a Strong positive correlation. The p<.001 suggests TCRS has a significant association with TRLES.

b)   Correlation Coefficient of TRLES and ECRS at .633 is a Strong positive correlation. The p<.001 suggests ECRS is a strong predictor of TRLES.

c)   Correlation Coefficient of TRLES and SCRS at .629 is a Strong positive correlation. The p<.001 suggests SCRS is a strong contributor to TRLES.

d)   Correlation Coefficient of TRLES and MCRS at .595 is a Moderate positive correlation. The p<.001 suggests MCRS is also a strong contributor to TRLES even if its influence is lesser than the other styles.

Interpretation: The Transactional leadership styles when demonstrated through the different competencies all show positive correlation with Effectiveness of the Transactional Leader, demonstration their contribution to perceived leadership effectiveness. Transformational Competency has the strongest correlation with Effectiveness of the Transactional Leader followed closely by Ethical Competency and Strategic Competency. Team Competency, though had a significant score, had the weakest correlation, suggesting it may play a less dominant role in the Transactional leader's effectiveness.

The high significance of these correlations highlights the predictive validity of these competencies and allows including them in a predictive model for leadership effectiveness of the Transactional Leader.

4.5.3 Correlation Between the 6 relevant aspects of the Organizational Culture and the combination of different Leadership competencies:

Table 8: Correlation of Organisational Culture and 4 Leadership Competencies

Culture Variables	Competency Variables	Transformational Leadership Competency	Ethical Leadership Competency	Strategic Leadership Competency	Team Leadership Competency
Culture of Board Support	Pearson Correlation	0.215	0.19	0.266	0.172
	Sig. (2-tailed)	0.001	0.004	0.000	0.010
	N	225	225	224	225
Culture of Customer Focus	Pearson Correlation	0.144	0.047	0.102	0.169
	Sig. (2-tailed)	0.030	0.481	0.127	0.011
	N	225	225	224	225
Culture of Employee Focus	Pearson Correlation	0.248	0.138	0.309	0.316
	Sig. (2-tailed)	0.000	0.039	0.000	0.000
	N	225	225	224	225
Culture of Execution Focus	Pearson Correlation	0.269	0.146	0.258	0.234
	Sig. (2-tailed)	0.000	0.028	0.000	0.000
	N	225	225	224	225
Culture of Experimentation Focus	Pearson Correlation	0.29	0.062	0.251	0.110
	Sig. (2-tailed)	0.000	0.351	0.000	0.100
	N	225	225	224	225
Culture of Partnership Focus	Pearson Correlation	0.329	0.199	0.279	0.219
	Sig. (2-tailed)	0.000	0.003	0.000	0.001
	N	225	225	224	225

4.5.3.1: Correlation of Board Support for the Sustainability Agenda and the effectiveness of the leader with the four Leadership Competencies:

a) The Correlation Coefficient of the Culture of Employee Focus with Transformational Leadership is 0.215 which is a weak to moderate positive correlation. It is however statistically significant (p-value: 0.001).

b) The Correlation Coefficient of the Culture of Employee Focus with Ethical Leadership is 0.190 which is a weak positive correlation. It is however statistically significant (p-value: 0.004).

c) The Correlation Coefficient of the Culture of Employee Focus with Strategic Leadership is 0.266 which is a moderate positive correlation. It is highly statistically significant (p-value: 0.000).

d) The Correlation Coefficient of the Culture of Employee Focus with Team Leadership is 0.172 which is a weak positive correlation. It is statistically significant (p-value: 0.010).

Interpretation: The culture of Board Support seems to have moderate correlation with Transformational Leadership and Strategic Leadership, suggesting that organizations where the Boards support the Sustainability Agenda. Leaders are able to effectively deploy their transformational and strategic competencies. The weaker correlations of Ethical leadership and Team leadership suggest the Board's support is probably less critical for leaders to demonstrate these competencies. This seems logical since Ethical Leadership is more internal and unlikely to be significantly influenced by external factors

such as Board Support. Team leadership competency is more operational and something the Board probably has less visibility of.

4.5.3.2: Correlation of the culture of Customer Focus and the effectiveness of the leader with the four Leadership Competencies:

a) The Correlation Coefficient: of the Culture of Customer Focus with Transformational Leadership Competency is 0.144. This is a weak positive correlation but is statistically significant at the 5% level (p-value: 0.030).

b) The Correlation Coefficient of the Culture of Customer Focus with Ethical Leadership Competency is 0.047. This is a very weak positive correlation and is not statistically significant (p-value: 0.481).

c) The Correlation Coefficient of the Culture of Customer Focus with Strategic Leadership Competency is 0.102. This is a very weak positive correlation and is not statistically significant (p-value: 0.127).

d) The Correlation Coefficient of the Culture of Customer Focus with Team Leadership Competency is 0.169. This is a weak to moderate positive correlation and is not statistically significant at 5% level (p-value: 0.100).

Interpretation: Transformational Leadership and Team Leadership show weak but statistically significant correlations with customer focus suggesting that a Culture of Customer focus may drive the effectiveness of leaders who have Transformational and Team-oriented leadership competencies. Ethical Leadership and Strategic Leadership do not have meaningful or significant correlations with the Culture of Customer Focus.

4.5.3.3: Correlation of the culture of Employee Focus and the effectiveness of the leader with the four Leadership Competencies:

a) The Correlation Coefficient of the Culture of Employee Focus with Transformational Leadership Competency is 0.248. This correlation is statistically significant ($p < 0.01$).

b) The Correlation Coefficient of the Culture of Employee Focus with Ethical Leadership Competency is 0.138. This correlation is weak but is statistically significant ($p < 0.05$).

c) The Correlation Coefficient of the Culture of Employee Focus with Strategic Leadership Competency is 0.309. This correlation is moderate and is statistically significant ($p < 0.01$).

d) The Correlation Coefficient of the Culture of Employee Focus with Team Leadership Competency is 0.316. This correlation is moderate and is statistically significant ($p < 0.05$).

Interpretation: Based on the moderate positive correlations between Employee Focus and the three Leadership Competency areas namely Transformational, Strategic and Team competency, we can conclude that organizational cultures that focus on employees are likely to have effective leaders with these three competencies. Based on the significance scores the relationships appears to be meaningful. The only competency that did not show as strong a correlation is Ethical Leadership. This is interesting as one would have expected otherwise and needs to be explored further.

4.5.3.4: Correlation of the culture of Execution Focus and the effectiveness of the leader with the four Leadership Competencies:

a) The Correlation Coefficient of the Culture of Execution Focus with Transformational Leadership Competency is 0.269. This moderate positive correlation is highly statistically significant ($p < 0.000$).

b) The Correlation Coefficient of the Culture of Execution Focus with Ethical Leadership Competency is 0.146. This weak positive correlation is statistically significant at 5% level ($p < 0.028$).

c) The Correlation Coefficient of the Culture of Execution Focus with Strategic Leadership Competency is 0.258. This moderate positive correlation is highly statistically significant. (p-value 0.000)

d) The Correlation Coefficient of the Culture of Execution Focus with Team Leadership Competency is 0.234. This moderate positive correlation is highly statistically significant. (p-value: 0.000)

Interpretation: These scores suggest that the Culture of Execution Focus enhances the effectiveness of leaders with Transformational Leadership, Strategic Leadership and Team Leadership competencies in driving the Sustainability Agenda. The Culture of Execution Focus Execution seems to have limited but meaningful influence in driving the effectiveness of leaders with Ethical Leadership competencies,

4.5.3.5: Correlation of the culture of Experimentation and Innovation Focus and the effectiveness of the leader with the four Leadership Competencies:

a) The Correlation Coefficient of the Culture of Experimentation and Innovation Focus with Transformational Leadership Competency is 0.290. This moderate positive correlation is highly statistically significant (p < 0.000).

b) The Correlation Coefficient of the Culture of Experimentation and Innovation Focus with Ethical Leadership Competency is 0.062. This weak positive correlation is not statistically significant (p-value: 0.351)

c) The Correlation Coefficient of the Culture of Experimentation and Innovation Focus with Strategic Leadership Competency is 0.251. This moderate positive correlation is highly statistically significant (p-value: 0.000)

d) The Correlation Coefficient of the Culture of Experimentation and Innovation Focus with Team Leadership Competency is 0.110. This weak positive correlation is not statistically significant (p-value: 0.100)

Interpretation: These scores suggest that the Culture of Experimentation and Innovation helps leaders with competencies of Transformational Leadership and Strategic Leadership and to a small extent those with Team Leadership competency. This aligns with the researcher's expectation that the culture of experimentation and innovation and the elements of competencies have some mutual reinforcement. Ethical Leadership being more person centric understandably does not seem to be influenced by the culture.

4.5.3.6: Correlation of the culture of Partnership Focus and the effectiveness of the leader with the four Leadership Competencies:

a) The Correlation Coefficient of the Culture of Partnerships with Transformational Leadership Competency is 0.329. This moderate positive correlation is highly statistically significant (p-value: 0.000)

b) The Correlation Coefficient of the Culture of Partnerships with Ethical Leadership Competency is 0.199. This weak to moderate positive correlation is statistically significant (p-value: 0.003)

c) The Correlation Coefficient of the Culture of Partnerships with Strategic Leadership Competency is 0.279. This moderate positive correlation is statistically highly significant (p-value: 0.000)

d) The Correlation Coefficient of the Culture of Partnerships with Team Leadership Competency is 0.219. This moderate positive correlation is statistically highly significant (p-value: 0.001)

Interpretation: These scores suggest that the Culture of Partnership in organizations has a strong influence on the effectiveness of leaders with Transformational Leadership competency. It seems relatable since leaders who are transformational in the domain of the Sustainability Agenda typically seek collaborative partnerships. It is also reasonable to see that leaders with Strategic and Team leadership competencies as well as Ethical leadership competencies foster partnerships and demonstrate their competencies in organizations where the culture if of building and nurturing partnerships.

4.6 Testing of Hypothesis

Hypothesis: The hypothesis of this research is that effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Transformational and Transactional styles of leadership and a few critical Leadership competencies.

To test this hypothesis, the following 3 parts of the hypothesis had to be tested:

Hypothesis 1

H0: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Passive-Avoidant style than Transformational style of leadership.

H1: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Transformational style of leadership than Passive-Avoidant style of Leadership.

Hypothesis 2

H0: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Passive-Avoidant style than Transactional style of leadership.

H1: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Transactional style of leadership than Passive-Avoidant style of Leadership.

Hypothesis 3

H0: Effective business leaders leading the Sustainability Agenda do not demonstrate any distinct Leadership competencies.

H1: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate a few critical Leadership competencies.

Hypothesis 1 Test:

H0: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Passive-Avoidant style than Transformational style of leadership.

H1: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Transformational style of leadership than Passive-Avoidant style of Leadership.

The average scores of agreements to statements of Transformational leadership demonstrated through the 4 key competencies of Transformational, Ethical, Strategic and Team Leadership were 94%, 90%, 89% and 89% respectively compared to 40%, 37%, 34% and 29% for Passive-Avoidant style. The average of average score was 90% for Transformational style compared to 36% for Passive-Avoidant style. This is a strong endorsement that in the context of the Sustainability Agenda, effective leaders are perceived to demonstrate more of Transformational Leadership Style than the Passive Avoidant Leadership Style.

The sum of scores of 'Strongly Agree' and 'Agree' responses to the statements on Transformational and Passive-Avoidant Leadership totaled 2992 vs 920 respectively. This works out to a ratio of 3.3 to 1, meaning that for every score suggesting some level of agreement that passive-avoidant style was demonstrated by the most effective leader, there were 3.3 times as many scores of agreement that Transformational style was demonstrated by the most effective leaders driving the Sustainability Agenda.

Hypothesis 2 Test:

H0: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Passive-Avoidant style than Transactional style of leadership.

H1: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate more of Transactional style of leadership than Passive-Avoidant style of Leadership.

The average scores of agreement to statements of Transactional leadership demonstrated through the 4 key competencies of Transformational, Ethical, Strategic and Team Leadership were 88%, 86%, 87% and 82% respectively compared to 40%, 37%, 34%   and 29% for Passive-Avoidant style. The average of average score was 90% for Transformational style compared to 36% for Passive-Avoidant style. This is a strong endorsement that in the context of the Sustainability Agenda, effective leaders are perceived to demonstrate Transactional Leadership Style above the Passive Avoidant Leadership Style.

The sum of scores of 'Strongly Agree' and 'Agree' responses to the statements on Transactional and Passive-Avoidant Leadership totaled 2714 and 920 respectively. This works out to a ratio of 3 to 1, meaning that for every score suggesting some level of agreement that passive-avoidant style was demonstrated by the most effective leader, there were 3 times as many scores of agreement that Transactional style were demonstrated by the most effective leaders driving the Sustainability Agenda.

Hypothesis 3 Test:

H0: Effective business leaders leading the Sustainability Agenda do not demonstrate any distinct Leadership styles and competencies.

H1: Effective business leaders leading the Sustainability Agenda are perceived to demonstrate the combination of few critical Leadership competencies and styles.

The Mean, Standard Deviation and Variance scores of perceived effectiveness of leaders demonstrating Transformational Leadership and Transactional Leadership styles combined with the four Leadership competencies shows strong perceptions that effective leaders demonstrate these combinations of leadership competencies and styles.

The scores of correlations of the perceived effectiveness of leaders and the combination of the 4 leadership competencies with Transformational Leadership style suggest leaders who are perceived to be effective demonstrate the 4 leadership competencies alongside a Transformational Leadership style. Strategic Competency has the strongest correlation with the Effectiveness **Score** of the Transformational Leader followed by Ethical Competency and Team Competency

Based on the scores of perceived effectiveness of leaders and the combination of the 4 leadership competencies with Transactional Leadership style, it can be concluded that leaders who are perceived to be effective, demonstrate all 4 combinations alongside a Transactional Leadership style.

This proves the hypothesis that effective business leaders leading the Sustainability Agenda are perceived to demonstrate the combination of few critical Leadership Competencies and Styles.

Summary of Findings

- 3 leadership styles - Transformational, Transaction or Passive-Avoidant style - were studied on how they were observed through actions taken in 4 critical leadership competency categories– Transformational Leadership, Ethical Leadership, Strategic Leadership and Team Leadership. The survey included 12 questions, 3 on each style anchored to the 4 competency categories.

- Based on the scores, it was evident that leaders with all 3 leadership styles - Transformational, Transactional and Passive-Avoidant leadership were seen to be effective though to differing degrees. This study provided a strong endorsement that in the context of the Sustainability Agenda, effective leaders seem to demonstrate Transformational Leadership style above all, followed closely by leaders Transactional Leadership Style. Though by a much smaller number, some Leaders perceived as the most effective leaders demonstrate the Passive-Avoidant style. This suggests a place for all three styles of leadership.

- The average score of responses of 'Agree' and 'Strongly Agree' to statements of Transformational Leadership was as high as 90%, of Transactional Leadership 88% and of Passive-Avoidant leadership 35%.This is a strong endorsement that in the context of the Sustainability Agenda, the most effective leaders are those who are seen deploying Transformational and Transactional Leadership styles.

- Most respondents perceive that leaders who demonstrate behaviours of Transformational Leadership are more effective in driving the Sustainability Agenda than leaders who use a Transactional style. But given the small difference

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in levels of agreement on both (87% and 82%), it is likely that these styles are seen as almost equally important. The Avoidant style is perceived to be significantly less important in driving the Sustainability Agenda but given that as many as 48% of respondents felt effective leaders demonstrate the Passive-Avoidant style of leadership, it is important to acknowledge that there are possibly many contexts and situations in leading the Sustainability Agenda when this style is the most effective.

- The strong correlation scores of perceived effectiveness of leaders and the combination of the 4 leadership competencies with Transactional and Transformational Leadership style confirms that leaders who are perceived to be effective, demonstrate all 4 combinations alongside a Transactional Leadership style.

This proves the hypothesis that effective business leaders leading the Sustainability Agenda are perceived to demonstrate the combination of few critical Leadership Competencies and Styles.

The role of Organizational Culture was also explored in this research. The six aspects of organizational culture selected to see if they helped or hindered business leaders be effective in driving the environmental Sustainability Agenda showed that 90% of respondents agreed that the six dimensions of culture were either 'Very Important' or 'Important', confirming the significance of the role of culture in enabling business leaders to be effective in driving the Sustainability Agenda.

4.7 Conclusion

The conclusions we can draw from this research are that effective business leaders leading the Sustainability Agenda demonstrate largely a Transformational and Transactional style of leadership. Furthermore, the elements of organizational culture are perceived to have a significant impact on the effectiveness of leaders driving the Sustainability Agenda.

CHAPTER V:

DISCUSSION

5.1 Discussion of Results

Among the many problems that humanity is grappling with today, possibly one of

the biggest and most complex challenges is that of Climate Change. Since Businesses

collectively have had a significant role in extracting the earth's resources and polluting it

at a pace far greater than the earth's capacity to produce and heal, leading to the climate

crisis, business have to take greater responsibility in addressing this crisis. Leaders in

businesses have to lead the Sustainability Agenda and aggressively decarbonize. This

requires leaders to be competent and lead in a style that is effective in building a shared

vision and getting everyone to collaborate to deliver on this daunting challenge.

Based on the findings from the research, here are the key points for discussion:

1.   The results of the research survey showed quite conclusively that respondents

perceived that in the context of the Sustainability Agenda, the most effective

leaders demonstrated Transformational Leadership style above all, followed

closely by the Transactional Leadership Style. A much smaller number of

respondents perceived effective leaders demonstrated the need for Passive-

Avoidant style. Despite the difference, this affirmed the role of all three styles of

leadership in addressing the challenge of the Sustainability Agenda.

2.   The findings of this research confirm that there are leaders who are perceived to be

effective in delivering on this challenge, are deploying the leadership styles and

competencies critical for sustainability leadership. This holds out a promise that leaders can possibly be recruited keeping these aspects in mind. Furthermore, leaders can be developed to be effective in this space by focusing on these factors of the critical competencies and relevant leadership styles.

3. The findings on the location of the most effective business leaders suggests that there is evidence from across countries globally of effective leadership in the business on the topic of sustainability. This suggests the Sustainability Agenda is being worked across countries and offers hope that businesses around the world will continue to contribute to the decarbonisation effort and that we should not have an over-reliance on either the developed or developing countries to do it all.

4. The responses to the question on which industry the most effective leaders came from, showed that almost a quarter of respondents (23%) perceived leaders to be from conventional industries. Given the significant emissions by the conventional industries and the need for companies in this fold to do the needful, this was a very promising finding suggesting that leaders in these companies are taking action.

5. The responses on the question of what levels of leaders are the most effective pointed to almost half of respondets saying it was the Seniormost Leadership. This is significant since it challenges the narrative often heard that the ones who are really accountable for driving the Sustainability Agenda are not doing their job. It also offers hope that some of the seniormost leaders in organizations are indeed taking action not just on Profits but on the Planet dimension too. It was also interesting to see how the most effective leaders were seen by over two-third

respondents to not be limited to one or the other level but come from across levels, offering the hope that visible leadership in this area was seen to be transcending hierarchy. It was perhaps to do with organizations making Sustainability part of the their Purpose and encouraging everyone to do what was required, backed by the requisite authority.

6. The scores on selected key dimensions of Organizational Culture showed that the elements selected were all seen as being 'Very Important' in enabling business leaders to drive the Sustainability Agenda successfully. underscoring the importance of these elements in making the leader effective in driving the Sustainability Agenda.

7. The 12 questions on Leadership Style section were anchored on the 4 critical Leadership Competencies (Transformational Leadership, Ethical Leadership, Strategic leadership and Team Leadership) with each competency being tested across each of the 3 Leadership styles (Transformational, Transactional and Passive-Avoidant). This provided a robust mix of the 'What' (competence) and the 'How' (style) aspects pertaining to the leadership that people saw in the form of behaviours. The scores suggest respondents resonated strongly with this combination making it more comprhensive.

8. When we acknowledge that the earth's climate is in a precarious situation and that a significant transformation is needed, it can be somewhat disheartening for the advocates of responsible climate leadership to see that the Transactional Leadership style was seen as the most effective form of leadership of the

Sustainability Agenda by more respondents even though by a small margin. Advocates of urgent climate action blame this style of leadership for the state of affairs. This researcher heard numerous examples of 'doing what is practical and convenient' vs 'doing what is right for the environment'. For example, if government incentives are for climate related programs, businesses are willing to participate in these programs. If there are no incentives, there is no participation. Businesses are largely led by transactional leaders who are involved and interested when there is something to be got. There is a general lack of proactive approach to tacking climate challenges. Against this reality, the tone setting from the top is critical. Where the organizational culture is of ad-hoc Board support for the Sustainability Agenda, or where tokenism is the name of the game, one can expect to see Transactional Leadership of the Sustainability Agenda. It is the most convenient solution for the short-term and for maximizing individual gains, explaining its prevalence and popularity.

9. Scores on elements of the passive-avoidant style of leadership was also as high as 48%. Though only 1 and 4 respondents ranked this style as more effective than the transformation and transactional style respectively, aspects of being passive and avoidant were seen by many as being the most effective ways of leading the Sustainability Agenda. While there may be different reasons for this, it suggests a big percentage of leaders who are not taking the Sustainability Agenda as a priority.

10. It was heartening to see from the survey results respondent's perception that they saw a very strong linkage between business leaders' effectiveness on the Sustainability Agenda and their ability to transform the organizational culture by integrating sustainability into the business strategy and business model, and building a shared vision. The findings suggest that employees understand how important it is that the leader with a transformational leadership style demonstrates that a mindset, attitudes and beliefs that are congruent with the action of creating a shared vision and it is not an action that the leader has taken on to impress others.

11. The method this study used to measure the 3 styles referred to in the Full Spectrum of Leadership styles was different from from Bass and Avolio's which used the factors of Idealized Influence (II), Inspirational Motivation (IM), Intellectual Stimulation (IS) and Individualized Consideration (IC) as the basis for the leadership styles. This research used behavioural statements anchored to critical competencies deployed in different styles as the basis. In doing so, it addressed the key criticisms on the Transformational Leadership theory in that it mixes ends and means confounding leadership and its effects and that it does not have a clear theoretical basis (Jensen et al., 2019). In building a framework in this current research based on researched competencies, the theoretical basis has been called out in the context of the Sustainability Agenda, hopefully making the framework not just more robust but also contextually relevant. The Full Spectrum of Leadership theory is believed to be more tested and validated than many other Leadership theories and certainly the most validated theory in the

Transformational Leadership space. This current research serves as another

validation, this time in the domain of the Sustainability Agenda. This also adds to

the agreement of scholars who opine that this theory has a universal application

because it has a capacity for being adapted to different contexts and cultural

settings (Paulienė, 2012).

12. One of the challenges scholars have posed to Transformational Leadership theory

is that it is based on an assumption that leadership looks and works identically

universally across contexts (Ladkin and Patrick, 2022). While the sample used in

the current survey is of 225 respondents, the very high levels of agreement from

respondents from diverse businesses across different countries, regions and

continents and with no marked difference in scores across these contexts, proves

the theory appears to apply globally.

5.2 Conclusion

This research established that business leaders who are most effective in leading

the Sustainable Agenda in organizations demonstrate more of Transformational and

Transactional Leadership styles and a few critical leadership competencies. These results

are significant because employees who are one of the key stakeholders of organizations

were respondents. Employees' awareness of the Sustainability Agenda and of how leaders

are showing up is quite central to the sustainability challenge.

Gallup, a global HR advisory and analytics company reviewed 100 million records

of employee data, by far the largest database of its kind, to highlight that the leadership

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which involved employees in the sustainability challenge of the company turned it into a source of significant motivation and moved employees from compliance to true committed action, inspiring them to expend their discretionary effort and go well above and beyond. In its paper, 'The Will of the Workplace in Environmental, Social and Governance', Gallup emphasized that leaders could only be effective in the Sustainability Agenda if they could galvanize their people to change their behaviours and actions. While it is possible for a few people to measure the organization's carbon footprint and do the key things to stay on the right side of regulations, to actually address the Sustainability Agenda and get to Net Zero, leaders will need to bring their people along. The findings of this research spell out once again the importance of the employee perspective and confirm the critical competencies and leadership styles that employees find to be the markers of effective leadership in driving the sustainability agenda.

CHAPTER VI:

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

This study threw light on the ultimate objectives of this research were, namely:

1.   We know what behavioral evidence to look for when selecting business leaders who are expected to lead the Sustainability Agenda in organizations.

2.   We know what to coach emerging leaders on, so that they can be effective in leading the sustainability challenge.

3.   We possibly know what organizational or external factors may be important to acknowledge when assessing the effectiveness of business leaders in the area of sustainability leadership.

In combining the Leadership Competencies and Leadership styles in the same frame in the context of the Sustainability Agenda, it gives employees the opportunity to see leadership in action, ie what leaders actually do on the Sustainability Agenda and how they do it. In the context of the Sustainability Agenda, this combination of the critical competencies and the right style of leadership enables effective leadership to be demystified and their beliefs, attitudes and values be 'seen' through their behavioral patterns. It makes the leadership in this complex area less complex and more objective making it more managable and instituionalisable.

6.2 Implications

In the context of the business leader leading the Sustainability Agenda, the following are possible practical implications of the way the leadership style and competence combinations can create the messaging and narrative in the organization:

1.   **Predict Leader Effectiveness:** While more studies are needed to confirm some of the findings with bigger samples and across different industries and geographies, there is a possibility that we can use Leadership Competencies and Leadership Styles as a good basis for predicting where leaders of different styles and competencies may have greater possibility to be effective in driving the Sustainability Agenda and where they may have lesser chances.

2.   **Assessment for Development:** This framework can support organizational leaders do their self-assessment of where they themselves may be seen by employees. It may also allow leaders to define the context better to employees to better align the understanding of the needs of the organization and the appropriate expectations they ought to have from leaders. For example, for an organization struggling to stay profitable, the leaders may have to be more focused on profitability. If working the Sustainability Agenda provides it some helpful leverage in the short-term with regulators, financiers or customers, it may be helpful for them to work the Sustainability Agenda. The leaders who well adopt a Transactional Leadership style and deploy the critical competencies as needed e.g. being transformational on driving a cost and profit focus in the company, being strategic about what to prioritize, upholding business ethics in items that are foundational such as financial integrity and getting the team to collaborate to support one another. For an

organization where there is no such leverage to be had and working on Sustainability Agenda is an additional area of focus that is likely to distract from the sharp focus needed on costs and profitability in order to survive, the leader may choose the Passive-avoidant style on the Sustainability Agenda. Knowing this can help leaders better articulate to its stakeholders what the organization needs to do at any point in time. This prevents it from having to be all things to all people.

3.   **Leading Indicators:** While every organization has to be clear where it stands at any point in time with reference to the Sustainability Agenda, the chances are that the styles of leaders and how they demonstrate the critical competencies will also predict the level of success they can expect in the Sustainability Agenda, serving as leading indicators.

4.   360 Feedback: This method can be turned into a 360 assessment to understand how leaders show up in terms of Leadership Styles and in the demonstration of the critical Leadership Competencies. Organizations which are serious about driving the Sustainability Agenda with the rigor it deserves may need to consider instituting a 360-feedback process where regular targeted pulse surveys are conducted to check how progress towards key milestones are being experienced.

5.   **Perception Index:** The perception of stakeholder's matter. Increasingly, the perceptions of employees and the broader talent pool will matter more as they will choose to work with businesses that are making more progress on the Sustainability Agenda. A 'Sustainability Leadership Perception Index' that collates impressions anonymously and voluntarily from existing employees is likely to provide a good barometer of progress as

viewed from the lens of employees. This can complement the mandatory reporting as well as the self-proclaimed achievements in Annual Reports or in Sustainability Reports that companies publish. A Sustainability Leadership Perception Index', while not suggesting factual accuracy, may nonetheless show where the company stands in the eyes of public opinion. This can provide some counterbalance to the voice of the only stakeholder who seems to be asserting their influence - shareholders who are typically consumed by profit and share price. This index can point to blind spots and help organizations decide how they wish to close the gap between perception and intent.

6.3 Recommendations for Future Research

The topic of leadership of the Sustainability Agenda needs a lot more research. The following areas can be suggested for subsequent research, all in the context of the business leaders leading the Sustainability Agenda:

a)   A study of the Leadership styles by country ie, a country-by-country study of business leaders driving the Sustainability Agenda. This will likely highlight nationality culture differences that would provide a nuanced understanding of how leadership styles can be experienced differently across the globe.

b)   A study of the Leadership styles of business leaders by industry. This will likely highlight how the Sustainability Agenda is beng led in each industry and highlight aspects of leadership styles that may be more required than others in a particular industry.

c)   A study of key aspects of leadership of the Sustainability Agenda in businesses

that different levels of leadership are accountable for and whether they have the requisite levels of authority and empowerment to deliver on their accountability.

d) A study on aspects of culture that would be most important for different kinds of organizations. For example, for an organization in the conventional industry where the challenge of decarbonisation is substantive, perhaps the support from the Board would be more important than a culture of looking to customers to define the Sustainability Agenda. The specific roles that Boards need to play would also be an area of worthwhile research.

e) The strong confirmation that Board support is very important for leaders to be effective raised a larger question on whether Boards were sufficiently aware of this expectation from them and can be the subject of a dedicated study.This can have implications on Board responsibilities and how Boards need to stand behind areas of strategic value such as the Sustainability Agenda.

f) A study that would be most interesting is one that tells us what percent of leaders in organizations are being transformational vs transactional vs passive-avoidant. Having a big percentage of leaders who are transformational would be important to have the desired impact. Knowing the status of leaders will enable development of more leaders to step up.

g) The method this study used to measure the 3 styles referred to in the Full Spectrum of Leadership styles can be the subject of subsequent research, This research departed from Bass and Avolio's method of testing the Full Spectrum of Leadership in that it did not try to use the factors of Idealized Influence (II),

Inspirational Motivation (IM), Intellectual Stimulation (IS) and Individualized

Consideration (IC) as the basis for the leadership styles. It used behavioral

statements of critical competencies deployed in different styles as the basis.

h)   There is a huge need for the theories on sustainability leadership to be applied to

Small and Medium Enterprises which represent 90% of all businesses globally and

provide 50% of the world's employment (CDP, 2022). CDP, the non-proft running

the world's only independent Supply Chain Disclosure system, in its 2021 Report

mentioned that to deliver on their Scope 3 emissions, big companies will need to

transform practices in the SMEs supplying their products (CDP, 2022). There is a

real need to apply the principles of sustainability leadership in SMEs if Supply

Chains have to have measurability and thereby improvement in its emissions.

There is also tremendous potential to create a bottom-up movement in community-

based social enterprises using a Transformational Leadership approach

(Suriyankietkaew, Krittayaruangroj and Iamsawan, 2022). Many of these SMEs

are part of the supply chain of the bigger local, regional and global companies

which see the greening of their supply chain as an important step in their own

transformation. If these SMEs do not manage to adopt the sustainable production

methods they will be left out of the supply chain, putting their existence into

question.

6.4 Key Recommendation for stakeholders of Businesses

The effectiveness of business leaders has been typically measured in terms of profitability, revenue, customer service, market expansion, etc. Depending on the role of the leader, different aspects may have been the focus. While businesses have largely had tremendous success in these conventional measures, offering tremendous value through their products and services that have made lives of people better, they have also been using up the earth's finite resources to the point that the regenerative capacity of the earth is under strain. The resources needed to produce for today's consumerist society are depleting the earth and the wastes being created are drowning the land, rivers and seas in unmanageable amount and types of industrial waste. Most business leaders do not think about how these phenomena are integrally connected to their roles. As a collective, business leaders view these problems mostly as being outside their realm of control and hence continue to excel within the conventional measures of effectiveness. In many industries, the more effective they are in driving the conventional measures of effectiveness, the worse they make it for environmental sustainability. Their race to be better in these conventional measures further perpetuates the problem where the processes they deploy for securing the raw materials, production, transport, sales and distribution increase the extraction, pollution and waste, taking away the earth's power for regeneration and survival leading to collapse of ecosystems, elimination of habitats and species and creation of the grounds for diseases and irreversible environmental issues. However, conventional measures of effectiveness do not encompass the fallouts on the environment. The climate catastrophe is a prominent fallout of this exclusive one-sided

focus on the classic measures of effectiveness that we have lived by unquestioningly. There is a need to take a more wholistic view of the measures of effectiveness of business leaders and revisit the values that defined success in the industrial era and in the market-based capitalist economic model.

A wider measure of effectiveness. A more comprehensive measure of effectiveness of the business leader needs to include measures of environmental sustainability such as those that measure reduction of greenhouse gas emissions, reduction of extraction of the earth's finite resources, reduction of wastes, balanced use of land and water, etc. This does not mean dropping the conventional measures of effectiveness but rather integrating the relevant measures of sustainability such that organizations can present the full picture of what they deliver and how they ensure that they take responsibility for the environment in the process. Net Zero is the way most organizations frame the issue conveying the two sides of the equation with respect to carbon emissions. There is need for organizations to adopt measures that track effectiveness using a balanced scorecard approach where carbon neutrality is a key dimension.

Measuring Sustainability: Easy as it sounds, measuring sustainability is hardly easy as of now. Various standards and frameworks have been developed over the years by various international and local organizations to quantify performance on different environmental parameters. Many of these standards and frameworks are complex, need detailed tracking, differ by industry, regulatory environment, organizational size and scope of work. Measures are performance output of the organization and its leaders in terms of the impact on environmental sustainability. Where they have regulatory teeth, conflicting standards

confuse and frustrate implementors. Well intended leaders can often feel annoyed and unable to have a coherent plan to embed the intended sustainability focus. This research does not intend to define what measures of sustainability are best suited to any business leader but rather take the view that the specific measures and actions would need to be based on the reality of the organization. The approach is that each organization and business leader needs to define its own set of actions to work towards Net Zero, in effect its Sustainability Agenda.

Applying to SMEs: There is a huge need for Transformational Leaders to be developed in Small and Medium Enterprises which are the mainstay of many economies, specially in Asia. There is tremendous potential to create a bottom-up movement in community-based social enterprises using a Transformational Leadership approach (Suriyankietkaew, Krittayaruangroj and Iamsawan, 2022). Many of these SMEs are part of the supply chain of the bigger local, regional and global companies which see the greening of their supply chain as an important step in their own transformation. If these SMEs do not manage to adopt the sustainable production methods they will be left out of the supply chain, putting their existence into question.

As is obvious, for the state of the climate we are in, we need more of the Transformational style of Leadership in businesses which are the biggest polluters. The progress made by these organizations to date on the Sustainability Agenda in particular is precious little while their damage is colossal. This Transformational style is needed as the Sustainability Agenda requires change amongst all. Organizations need a compelling message that engages the hearts and minds of employees and galvanizes them to follow the vision-driven path of change. It is a positive style of leadership which highlights what

is possible, making it an energizing for everyone who otherwise can feel quite overwhelmed by the complexity of the challenge and quite hopeless at the state of affairs.

6.5 Conclusion

One of the biggest challenges humanity is facing today is that of Climate Change. Rapid industrialization, growing urbanization, reckless growth and unhindered consumerism are at the root of this climate crisis. Governments the world over, their legislative bodies, their executive, their judiciary have all been somewhat involved in the Climate Change conversation and efforts to manage the fallout as well as take actions to prevent further damage. These efforts have been on for at least the last two decades. Yet the progress in tangible terms against what is needed is pitiably less. Conversations around the paradigm of capitalist economy, its implications in terms of consumerism and its fallout in terms of the strain it has put on the earth's finite resources, are building up but are still at their infancy. There is till this day no system of holding the polluters accountable and no mechanism of making the polluter pay for the pollution. The burden is falling on society and the ones paying the price are the poor millions mostly in underdeveloped and developing countries. These most vulnerable are also the ones who are most disenfranchised – they have no say and no platform to be heard.

Although the 2015 Paris Agreement climate targets seem certain to be missed, very few experts are questioning the adequacy of the current set of approaches that are being used to avoid unacceptable catastrophes. There are many questions about the current approach that one can and should raise at the global inter-governmental level. These

questions range from whether the goals set are realistic to what the consequences are for any one party which does not comply with the committed reduction targets. Equally there are many questions one can and should raise at the level of the different sectors in any country that contribute to climate change, including the role of tech companies which make multiples of billions of profit every quarter and yet feel they have the prerogative to ignore or reduce their commitments when the data centers powering their operations come up with big electricity bills. Or when oil and gas majors point to the continued need for fossil fuels and increase their production facilities and capacities, giving them a better standing among the shareholding community, while ignoring the scientific community who point to the devastating impact their activities are having on the earth. Selective communication of scientific data, conveniently combining truths with lies, making unrealistically optimistic assumptions – all of this is at play, to obscure the reality from the common citizen of the world of how deep a problem we are in. Political pressures, which are integrally connected to economic interests, ignores critical scientific concerns and pre-emptively dismisses important evidence in international negotiations. As a result, besides a small minority of passionate climate champions, the vast majority of citizens remain oblivious of the present and growing crisis and the level of effort and time required to control and rebalance the climate.

Many of us around the world are living with the notion that each of us doing our part will prevent climate change and its consequences. There is now enough scientific evidence to suggest that that the amount of GHG in the atmosphere is already so high that reduction of GHG and removal of CO_2 will not prevent climate change in the 21st

Century. There is no basis to support assertions that overshoot of Paris Agreement targets will be back to 'normal' soon. There is scanty evidence to suggest that methods to reduce GHG emissions and to removal them from the atmosphere can be put in place before dangerous climate catastrophes occur. Even when the different Climate Change models from IPCC and other climate bodies point to looming disasters and people pick and choose insights from them only as they please, they assume that those who agree with the full scope of prospective disastrous impacts are the chronic pessimists. These notions and perceptions do not only make risk assessments toothless but also take away the urgency of developing a viable Climate Risk mitigation strategy well captured in the article *Bad science and good intentions prevent effective climate action* (Taylor et al., 2023).

Businesses have to take greater responsibility for the state of affairs and aggressively decarbonize. Going by how little is being done against what is needed, it is obvious that a seismic change is needed in the way organizations are run. Leaders responsible for the profitability of their businesses will need to take accountability for not just Profit but for the other two components of the Triple Bottomline – Planet and People – in order to deliver on their responsibility. All business leaders will need to have a People Plan and a Planet Plan alongside their existing Profit Plan. The Planet Plan is what we have called the Sustainability Agenda.

To bring humanity back from the brink of disaster, leaders have to take this up as a priority, look at facts in the eye and embark on the transformation that is needed. The key competencies of transformation can enable effective leaders to build shared vision, define the strategic direction and plans and lead teams to actions that strike a new balance among

the 3Ps. The key competencies described in this paper can enable leaders to take the difficult road of transformation less travelled and bring their followers along. The leadership style of transformation can enable the leader to be seen, heard and felt. To achieve the sustainability goals, leaders must challenge the status quo, create, and provide meaning, and develop in employees the mindset of being personally invested in achieving sustainability outcomes (Wiesner, Chadee and Best, 2018).

This research demonstrates quite conclusively that the most effective business leaders driving the Sustainability Agenda demonstrate Transformational Leadership style followed by the Transactional Leadership style. The findings of this study were based on perceptions of respondents which in turn were based on sustained observation of leader's behaviours, actions and words over a long period of time. This researcher intends to use this same frame of key leadership styles and key leadership competencies for effectively driving the Sustainability Agenda, to develop a proposed 'Sustainability Leadership Perception Index'. This SLP Index can provide a barometer of how business leaders are being perceived by one of their key stakeholder groups, namely employees, on the topic of advancing the Sustainability Agenda. The assessment will help organizations decide what they need to do to close the gap between perception and intent. A publicly visible score will enable organizations to show how they are faring on this perception in addition to the Sustainability/ ESG reports they publish. These will collectively give a more complete picture of the state of affairs in how the Sustainability Agenda is being led. This will challenge window dressed and greenwashed reports that has unfortunately become the mainstay of corporate reporting.

Humanity has found answers to problems of all kinds that it has been confronted with all along its history. The story of finding these answers is the story of evolution itself. Ultimately to get to a net zero reality will involve a big change in the ways of working for every business. It is such a pervasive challenge that leadership authors have referred to the leadership of sustainability as the very evolution of leadership ability, underscoring the importance of this topic in today's times (Metcalf and Benn, 2013). This researcher hopes that commercial organisations will take their respensibility towards the planet seriously and will pave the way for the evolution of leadership to one that defines successful leadership as one that delivers its accountabilities towards all the 3 Ps – Planet, People and Profits.

APPENDIX A

SURVEY COVER LETTER

Dear Sir/ Madam,

I am currently pursuing my Doctorate and researching the topic of Leadership of the
environmental Sustainability Agenda in businesses. For this, I am conducting a survey
which takes 5-7 minutes to complete. I'd be grateful if you can share your inputs.

For context, please view this brief (2.5 min) video before taking the survey

(https://youtu.be/Fr9w21F8Vow)

The data collected is for the sole purpose of this research. Responses will be kept
confidential and not shared with the organizations of respondents. You may wish to use
your personal email ID when responding.

Thank you.

Manojit Sen

APPENDIX B

INFORMED CONSENT

No personal details including Names, Email IDs, Contact Numbers, Age, Gender, Country of Origin, Name of Organization, Role in the organization, etc were collected.

Besides, the Survey was sent via email or WhatsApp where it was mentioned that the survey was for academic purposes and purely optional. As participation was voluntary, it was assumed that the data collected could be analysed in order to draw relevant insights. In the Survey Cover Letter, the following was mentioned: The data collected is for the sole purpose of this research. Responses will be kept confidential and not shared with the organizations of respondents. You may wish to use your personal email ID when responding.

In the Survey, at the end, the following line was added: If you would like to know more about this topic or get a copy of the research findings when it is published, please leave me your personal email address.

APPENDIX C

INTERVIEW GUIDE

The following guidance was added in the Survey form to enable respondents to understand

the objective and nature of the Survey along with key definitions.

Please read this before attempting the questions.

Objective: This survey is to understand what style of leadership helps <u>Business Leaders to</u>

<u>be most effective in leading the environmental Sustainability Agenda</u>.

This is a perception study and not a factual assessment of the effectiveness of any

identified leader or organization.

Definitions:

In this research, the term **'Sustainability Agenda'** refers to all actions an organization

must undertake to 'do business without negatively impacting the environment'. This

agenda may be called by different names and be managed by different teams in different

organizations.

Effective leaders are defined here as those you observed/know of as being effective in

driving the environmental Sustainability Agenda forward in a way that is most appropriate

in their context.

Premises: This survey is based on the following 3 premises:

a. Climate change is one of the biggest challenges of our time and stakeholders of business (including employees) expect its leaders to play an active role in addressing it in a way that is appropriate for their context

b. Regardless of our own role, industry, or country, each of us possibly holds a perception of the effectiveness of business leaders in driving climate change-related actions.

c. Our perception of effectiveness of leaders may be based on observation of the leaders' actions and behaviours or on inferences from anecdotal evidence or delivered results.

SECTION A: CONTEXT: The context of effective business leader(s) driving the environmental Sustainability Agenda. (Effective leaders are defined here as those you observed/know of as being effective in driving the environmental Sustainability Agenda forward in a way that is most appropriate in their context)

Q1. Where are most effective leaders located (i.e., country where they work)

Q2. In your opinion, in which type of industry are the most effective leader(s):

Q3. In your opinion, at which level in the organization are the most effective leader(s) to be seen

SECTION B: ORGANIZATIONAL CULTURE: How important are these aspects of organizational culture in helping the business leader be effective in driving the environmental Sustainability Agenda. (Effective leaders are defined here as those you observed/know of as being effective in driving the environmental Sustainability Agenda forward in a way that is most appropriate in their context.)

Q4. Organizational culture of Board support for the Sustainability Agenda

Q5. Organizational culture of customer focus (i.e., customer needs drive the products and services offered including sustainable ones)

Q6. Organizational culture of employee focus (e.g., it develops employees for sustainability challenges and opportunities)

Q7. Organizational culture of execution focus (e.g., it works on delivering commitments including on sustainability)

Q8. Organizational culture of experimentation and innovation (e.g., it innovates constantly on sustainability solutions)

Q9. Organizational culture of building partnerships (e.g., it works with different external parties on sustainability topics)

SECTION C: LEADERSHIP BEHAVIOURS: Your perception of what effective business leaders do (Effective leaders are defined here as those you observed/know of as being effective in driving the environmental Sustainability Agenda forward in a way that is most appropriate in their context).

On a scale of 1-4, 1 being 'strongly disagree', 2 being 'disagree', 3 being 'agree' and 4 being 'strongly agree', please indicate how much the following statements match your perception of what effective leaders do. Please moderate your ratings based on the extent to which you perceive leaders doing all the items mentioned where the question mentions multiple actions.

Q10. Effective leaders transform the organization by integrating environmental sustainability into the business strategy and business model and activities and by visibly building shared vision.

Q11. Effective leaders actively engage on core business priorities (e.g., profitability, market growth, etc.,) and manage essential environmental sustainability topics (such as sustainability reporting) as needed.

Q12. Effective leaders prioritize only critical business topics that are linked to current profitability.

Q13. Effective leaders uphold high standards of business ethics with respect to environmental sustainability, going beyond practical concerns such as near-term profit objective

Q14. Effective leaders do what is both practical and ethical on environmental sustainability.

Q15. Effective leaders focus on core deliverables such as profit keeping ethical dilemmas on environmental sustainability aside.

Q16. Effective leaders define/implement the strategic business agenda by building long-term environmental sustainability at its core.

Q17. Effective leaders define/implement the strategic business plan by addressing current environmental sustainability requirements/ mandates.

Q18. Effective leaders postpone or avoid including environmental sustainability aspects in business strategy/ actions.

Q19. Effective leaders involve the team fully in co-creating and delivering the organization's environmental Sustainability Agenda.

Q20. Effective leaders involve the team to the extent possible in the organization's environmental Sustainability Agenda and progress updates.

Q21. Effective leaders do not involve the team in environmental sustainability topics.

Section D:

Q22. Optional - Please feel free to add comments if any, on other Leadership Behaviors needed to drive the Sustainability Agenda

Q 23. Your Country of Residence:

Q24. Your Industry (classified based on carbon intensity and decarbonization challenge)

Q 25. If you would like to know more about this topic or get a copy of the research findings when it is published, please leave me your personal email address:

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