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Assessing and Understanding Organization's Preparedness and Readiness for Change Management in a Projectized Organization. The Case of NNPC Limited Model for the Petroleum Industry Act.

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Abstract

The Federal Government of Nigeria, signed the Petroleum Industry Act (PIA) 2021 into law. The enactment ends a 20-year effort to reform the oil and gas sector to create a conducive environment for growth and address legitimate grievances of communities most impacted by extractive industries. The petroleum industry adopted a change management approach using a portfolio management framework to harness the Act's potential, effectively. Using literature review, the study aims to assess the preparedness of the Nigeria National Petroleum Company and industry stakeholders' preparedness to implement the stringent timeline outlined in the Act. Using the theoretical lens of the chaos theory and complex systems theory to assess change management preparedness with industry players from different countries, including the multinationals with different cultural backgrounds, miscommunications, and coordination issues. These complexities make the oil and gas industry environment somewhat disorganized and chaotic. When chaos occurs, we need tools and concepts to redirect attention and energy efficiently. The study posits that when determining NNPC's and industry preparedness for change, the culture and historical experience, policies, processes, accountability hierarchy, change agenda, human resources, and leadership's capability are vital considerations. Results from the study indicate that stakeholders and other predictors hinder favorable change execution. Consequently, change readiness and preparedness are elements to consider in assessing change management. Access to technology by stakeholders enables the integration of the change process at speed.

Keywords: readiness, leadership competence, change implementation, organizational change, change management, change agenda, traditional project scope, optimal state, corporate strategy

1.0 Introduction

The Nigerian Government, through its executive arm, signed the Petroleum Industry Act (PIA) into law on the 16th of August 2021. The enactment of the PIA ends a 20-year effort to reform the oil and gas sector capable of creating a conducive environment for growth and addressing lawful injustice meted out to communities impacted by extractive industries. [1] The petroleum industry has witnessed changes domestically and globally, with more indigenous players locally in the last 20 years. Militancy has declined from the peak in 2006 before the amnesty program of the Federal Government of Nigeria, but the climate change concerns have increased.

The concern for climate change has fueled aggressive efforts to reduce global consumption of fossil fuels leading to divestment by major industry players like Royal Dutch Shell. [2] The PIA, therefore, represents an effort by Nigeria to acknowledge the changing environment. The oil and gas sector has been Nigeria's primary foreign exchange earner, representing about 95 percent of foreign exchange earnings and 80 percent of its budget revenues [2]. The PIA provides a legal, governance, regulatory, and fiscal framework for the Nigerian petroleum industry, the development of host communities, and related matters.

How will this piece of legislation bring about changes in the industry? How will the Nigeria National Petroleum Corporation (NNPC) (renamed as Nigerian National Petroleum Company Limited, newly incorporated with the Corporate Affairs Commission of Nigeria) limited manage the transition from a government-controlled company to a private company registered under the Company and Allied Matter Act of 2020. Will the PIA be far-reaching to meet the aspiration of Nigeria? What are the measures put in place to manage the change? Considering the petroleum industry from the organizational readiness context has received little attention of assessing the legacy organizations' readiness to change. This two-part study series uses change management concepts and principles to assess and understand NNPC's preparedness for change using a projectized organization purview**.**

1.1 Change Management

Change management requires undertaking the activities that align portfolio (programs and projects) with the organization's strategy and activities that transition portfolio results into operations to realize strategic business benefits. Project fundamentally requires a well-defined start date and boundaries (statement of work that describes results that the project will deliver and the relationship of the deliverables to the business need [3], [4] and [5]. The scope may extend beyond the typical boundaries as outlined by Wysocki[5] to include:

(a) initiation activities before the project are chartered and

(b) transition activities to deliver and sustain the change successfully.

These activities may include change formulation, planning, and ongoing activities, such as product support and service management, change management, user engagement, or customer support, extending beyond the traditional project scope. These objectives range from dynamic evaluation of the initiative observed benefit and realignment of the project activities. The integration of the activities into the business to achieve value addition and sustain competitive advantage.

The change process spans all levels of a business from strategic objectives that are part of an overall organizational strategy [6] to actual performance evaluation. Thus, portfolios begin with formulating the change and its planning; change implementation produces tangible business deliverables (products, services, and results). These deliverables are transitioned into the organization's operations to produce benefits and add value to the business.

2. Purpose of Study

This study aims to understand the preparedness of NNPC Limited and the petroleum industry in Nigeria as part of the organizational learning experience to adopt change management by introducing the PIA of 2021. Within this broad paradigm of preparedness and readiness, the study will mirror change management theory in a matrix organization using the chaos theory and complex system theory to model its preparedness and readiness.

Additionally, care must be taken in assessing the preparedness through chaos theory and complex system theory as appropriate theory. [7] Given its dynamic outlook, it does not always follow protocols, with industry players from different countries, including multinationals with different cultural backgrounds, miscommunications, and coordination issues. These complexities make the environment somewhat disorganized and chaotic. When chaos occurs, we need tools and concepts to efficiently redirect attention and energy.

2.1 Conceptual Framework

This paper aims to address the need for change at the organizational level through the lenses of chaos theory and complex systems theory and identify issues and implications in readiness to change. The organizational culture will experience a cross-cultural shift to improve its socio-cultural context and intercultural competence. [8] The organization must rapidly realign structures, processes, and relationships to acknowledge the dynamic external environment. [9] This invariably means that chaos theory and complexity science of business will provide insight to the organization.

The organization needs to be adaptive, flexible, and agile to identify quickly and move on to opportunities. Visionary, insightful, and futuristic leadership provides the ability to identify and seize opportunities to remain sustainable [10]; in this line of reasoning, Noruzy et al. [11] noted that the primary underlying reason for successful organizational changes was effective communication (facilitation of two-way flow of information and timely responses). Other factors that Bevan [12] and Chait et al. [13]) noted, that can successfully support change is clarity, engagement (sense of ownership, belonging, and commitment where stakeholders are consulted), resources (requisite human, financial, technological assigned).

It includes alignment (system and processes support the change), leadership (developed, equipped, and committed to the change), and tracking (assess milestone accomplishments and adjust as required) [12],[13] . in view of the foregoing, the following factors align with models and frameworks of organizational change:

1. Leadership competence is critical to effective change in a dynamic and complex environment.
2. Change readiness might be critical to effective change within an environment of dynamics and complexities.

Thus, a search for clarity for the identified factors would lead to the following research questions:

(i) Is there a significant relationship between the competency of leadership (dependent variables, e.g., change effectiveness (independent variables, e.g., competitiveness) within an environment of dynamics and complexities (control variables, e.g., industries)?
(ii) What competencies of leadership would lead to change effectiveness?
(iii) What metrics would be appropriate to measure change effectiveness?
(iv) How could an organization measure change effectiveness?
(v) What metrics would be appropriate to measure change readiness? How could an organization measure readiness?

2.2 Methods:

The primary method used in the study was mainly a literature review to assess the preparedness and readiness of the petroleum industry in Nigeria, as to implement the PIA 2021 of the Nigerian petroleum industry to drive changes such as contextual factors and technology.

3. Literature Review

3.1 Change Transition Process

Change is measurable and its transition is quantifiable. This accounts for reasons why corporations must adopt the best-tested strategies in the management of corporate change. As indicated in Fig. 1 below, the level of effort required in each domain during a complete change life cycle process is shown. It is worthwhile noting the difference in the level of effort between each step because it will enable industry operators to appreciate the need to involve stakeholders at different times during the complete change lifecycle.

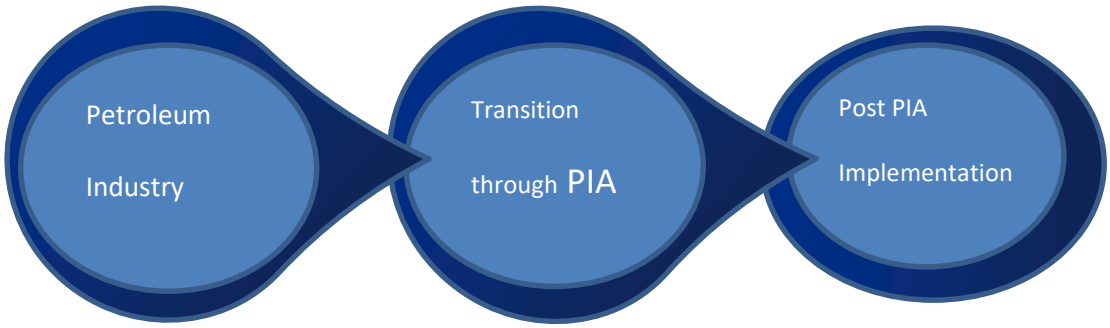

Fig. 1 Petroleum industry complete change lifecycle in Nigeria

Note that while program management activities are ongoing, the activities can cover multiple changes simultaneously. However, for a single change process, the effort is most significant in the following areas:

(a) Impact analysis when the organizational initiatives are selected and approved and

(b) Review and report when the change impact is assessed.

This helps guide project decisions concerning the next cycle. Beyond this stage, the remainder of the change cycle process, project activities consist of monitoring activities. Activities are either iterative or incremental during a change management cycle of the portfolio. These activities are at a high level throughout the entire change life cycle with dips during implementation, where activities mainly cover component oversight and integration. At the end of the complete cycle, when the program ends, activities fall to zero. It is crucial to indicate that the project may incorporate a continuous activity level to formulate the change and transition it into business as usual.

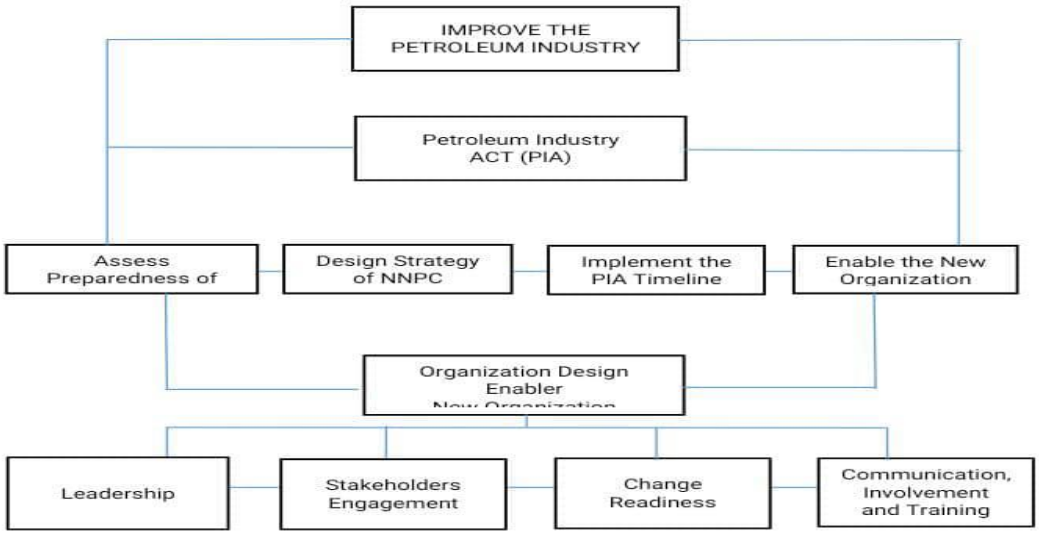

Fig 2. The Business Case for the Portfolio Framework Outlook

and beneficiaries of the change. They identify and clarify the need for change and participate in the change planning. These functions will be engaged continuously throughout the change. However,

their active participation will be requested during the transition when they must integrate the change into their business-as-usual activities when the implementation period ends. The implementation framework allows one year, from August 2021 to August 2022, to migrate from government-owned entities to private-driven companies; however, recent information indicates that the Nigerian Government has increased the implementation timeline by another 18 months. [14]

3.2 Assessing Change Readiness

Given the background, how does change management align with the PIA implementation by the petroleum industry? For every process, be it a project or operations, the description of change management is not complete until the subject of change readiness, and the change readiness assessment are explored. Change readiness refers to an optimal state of acceptance demonstrated by an organization [15]; in our example are the petroleum industry operators in Nigeria. It measures the reality of the current organization concerning future projections. How does implementing the PIA timelines align with the industry's future within the broader context of the fossil fuel business globally?

Broadly, the change readiness could be assessed from two perspectives:
a) Organizational systems and structures that need to be improved or support the change.
b) The People in the organization or project and existing or prevailing organizations or demographic cultures supporting or resisting the change.

In both cases, an assessment of the impact of the change initiatives undertaken by or impacted on the organization and its ability to absorb change. Even organizations with a high capacity for change and resilience will have a threshold and exceeding this threshold could jeopardize its ability to deliver its strategic objectives. What are the industry's structures, systems, and layers of regulations to support the change? The act provides for creating two regulatory bodies:
(1) Nigerian Upstream Regulatory Commission, to regulate the industry's upstream sector.
(2) The Nigerian Mid-stream and Downstream Petroleum Regulatory Authority regulates the midstream and downstream sectors.

And in addition, the Act provides for:
(3) The Nigerian National Petroleum Company Ltd, which was converted to a public company duly registered with Corporate Affairs Commission, but wholly owned by the Federation.
(4) Host Community Development Fund, to be established and administered by each petroleum license holder to cater for the development needs of their respective areas of operations.

Change readiness can be accomplished at single or multiple levels of the organization processes or across the entire organization in large organizations. [16], [17] Organizational systems are considered in their entirety and should not be considered independently. Generally, there are many interdependencies between systems when the organization operates complex systems indicating mutual dependence. The interdependence in complex systems should be identified and integrated with the change plan. Change readiness performed provides insights into the interdependencies of the entire system. [18]

When determining an organization's preparedness for change, the following elements should be considered as part of the assessment. The comprehensive assessments concern an extensive individual organization's preparedness to change, [19] which can be evaluated using the following benchmarks:

i) Organization's culture and historical experience in dealing with change. In assessing an organization's culture/historical experiences, we answer the question: What systemic

ii) attitudes, aids, and impediments exist in the organization that are likely to impact achieving change? It helps the assessors to focus on the "people side" of the process.

iii) Organization's policies, processes, roles, and decision-making norms related to change management. It answers the question: How well does the organization function in a well-defined manner during change efforts? It helps the assessors to focus on compliance with laws and regulations, including guidance for decision-making to streamline internal processes**.**

iv) Organization's accountability hierarchy. It refers to the processes of how the organization holds people accountable. Implementation of change, by definition, affects the work for which people are held accountable. It answers the question; can the organization hold its employees accountable? It helps the assessor how the organization's hierarchy crystalizes responsibility on an accountable entity for the performance of tasks.

v) Organization's human resources applied and the degree of expertise and experience. It answers the question: What capability and experience base is available to assure well-coordinated activities such as communication, process design, organizational structure design, and human resources planning? It helps the assessor determine the comprehensive resources available for the change process.

vi) Leadership's capability of supporting and sponsoring change. It answers the question: What leadership capability does the organization have, and how well will the change be supported to achieve organizational goals? It helps the assessor determine the change champion or facilitator for the change process.

Change readiness is measured fundamentally at the project level within a portfolio. The project management office can measure change readiness as part of its function as readiness assessments should be standard practice for each business case.[20] These assessments provide the specific objectives of a single project in alignment with business strategy and provide value at every level. The following elements should be considered part of the assessment when dealing with specific change efforts.

i) Barriers and limitations to moving the change effort forward. It answers the question: What drives/creates a desire for the envisioned change, and what creates impediments or speed bumps? The context for change includes such factors as marketplace conditions, competition, windows of opportunity, other competing resources, and the political environment. It answers the question, in what set of contexts does the change need to be successful?

ii) People and organizations. This addresses those who need to be involved in the change and the degree of knowledge about the proposed change. It answers the question, have we accurately identified all stakeholders and their vested interests, and are they aware of the potential change and its intended benefits?

iii) Support and resources associated with a particular change effort. It answers the question, what is needed to reduce impediments and enhance support for the envisioned change?

Change readiness assessments are administered in any manner that an organization deems fit. Organizations commonly use surveys, interviews, meetings, and focus groups. However, change readiness is collated at the organizational level because all the change elements at every level can influence each other.

3.3 Impediment to Change

The change will likely be met with resistance and potentially be derailed throughout all phases or steps in the change initiative. It is not uncommon for large, multimillion-dollar systems implementation projects to derail due to poor change management. All stakeholders should measure change resistance as changes are announced, along with ongoing sampling at critical points to monitor potential resistance throughout the change initiative. We saw resistance by the host communities who had borne the brunt of oil and gas exploration and exploitation for over half a century, including environmental devastation. This resistance could derail the implementation process and serve as a potential barrier. For the stakeholder to buy into the change process, the initiators (Ministry of Petroleum Resources and NNPC Limited) need to conduct a change resistance survey. Sample items to be included in a change resistance survey include:

i) Do you believe that this change is needed?
ii) How have the sponsors/initiators enabled the change to overcome opposition to the project?
iii) To what degree have you been engaged in the change management steps, tools, and processes throughout the entire life cycle of the change?
iv) Do you believe that the Government (Ministry of petroleum Resources or NNPC Limited) genuinely supports this change?

Based on the outcome of this survey of a large sample size, the initiators or sponsors then determine an overall resistance score, including a resistance score for each stakeholder group. If resistance is overt, the sponsor and those fulfilling the lead function can address this through practical problem-solving and stakeholders' meetings. However, if it is covert, the sponsors will need to work openly with stakeholders to allow the issues to surface. Besides the survey, some practical barriers to change capable of derailing change initiatives are provided.

3.3.1 Change Sponsor

In view of the foregoing, the absence of certain crucial factors could be inimical to the actualization of the full benefits of change. These factors are identified as follows:

i) **lack of a sponsor**: the sponsor function ensures organizational commitment to the change process and deals with issues encountered when implementing the desired action. In the PIA implantation process, the program has a good sponsor. The Minister of State for Petroleum was visible to drive the process and provide leadership. Often, the higher the sponsor is in the organizational hierarchy, the greater chance of success in fully deploying the change. An organization's business strategy often exists as the vision of its Chief Executive.

ii) **lack of commitment to funding and resources**: change requires the commitment of time and resources by a stakeholder to appraise the impacts and the required methods, tools, and skills. Else it may create a lag between implementation and the realization of the benefits. For the PIA implementation, funding and resources were made available. Organizations that do not address this issue effectively often do not commit to the change efforts.

3.3.2 Cultural Resistance to Change

In 2006 when the former President Olusegun Obasanjo sold the refineries to private investors, there was resistance by the various unions in the petroleum industry, including stakeholders. It was reversed in 2007 by the Late President Umaru Yar'Adua. In 2012, when Former President Goodluck Jonathan implemented petroleum products subsidy removal, it was greeted with nationwide protests. The plan of the present Government led by President Mohamaddu Buhari to remove subsidy by July 2022 was greeted by agitation for protesting, leading the Government to extend the subsidy regime by 18

months (July 2023). We have established culture or pattern of resistance to change in the petroleum industry. Corporate or national culture is the most significant barrier to the successful implementation of change. There are issues for the industry to overcome, including:

a) *Inertia*. When leaders see the need for change but are hampered by a workforce threatened by the perceived sacrifices. Conversely, organizational leaders who insulate themselves from day-to-day interaction with stakeholders and operations personnel and first-line management are the last to recognize that change is needed.

b) *Trust*. A lack of trust between the Government and the people (stakeholders) inhibits the change process and implementing or executing a change plan. The leadership needs to deplore competent first-line managers to serve as a bridge between the people and the leadership to engender better confidence-building processes. It also allows the organization to learn its resilience when challenged and what it does to achieve success. [21]

c) *Competencies*. Many organizations lack the competencies to change. A workforce with no exposure to world-class business models and change methods can hardly be expected to adapt to a new structure. Training key managers is not enough, but implementing adaptive systems is key to successful change management. The entire workforce needs to understand the change model adopted and move in the same direction.

d) *Bureaucracy*. Bureaucratic corporate decision-making processes often do not support growth and adaptation. As corporate structures evolve, there is a propensity to make decisions at the highest level. This creates a cumbersome decision-making process and is divorced from accurate and current information. The decision-making process should support structures that allow for long-term strategic decisions at the corporate level, tactical decisions to be made at the point of engagement, and operational decisions by front-line employees. The bureaucratic system of the past must give way to the new PIA regime to allow for seamless migration from regulators of the past like the Department of Petroleum Resources (DPR) and Petroleum Product Pricing and Regulatory Authority (PPPRA) to the Nigerian Upstream Regulatory Commission and The Nigerian Mid-stream and Downstream Petroleum Regulatory Authority.

3.3.4 Failure to Build Change Readiness

Stakeholders sometimes do not recognize the need to change their business processes. This may be due to current successes and not understanding that today's methods are becoming less relevant to tomorrow's successes. The PIA has been in the works for nearly 20 years; the industry players failed to optimize the opportunities, leading to the loss of investments to other African Countries. It was a failure to recognize new competitors and respond to trends. The worldview of the industry leaders created a framework for determining the information it considers essential to the process then. Information outside this framework was generally considered unimportant or ignored entirely. These circumstances caused the industry leadership to appear not to recognize the need to change.

3.3.5 Poor Vision of the Future

Lack of a clear vision of the future. The PIA change implantation strategy requires many people (stakeholders and employees in the organization transforming into new ones) to perform work differently. [22] These actions are rarely specified in procedures or detailed manuals. Hence, if where the industry is heading is not consistent with and precise in everyone's mind, then the daily decisions of stakeholders will not help move the organization toward the vision.

3.3.6 Technology Acquisition by All Stakeholders

Technology domains have emerged and shaped how businesses are conducted. Technology is an enabler and should be integrated into the change process. Technology is not a barrier to implementing change, but access could be a barrier. How has the program sponsors deliberately adopted technology for the PIA implementation?

Technological access to stakeholders is vital to achieving robust change initiatives? The decision to link a business process with a given technology because mistakes could prove costly. Buying into an emerging technology too early leads to higher acquisition costs and risks due to the potential for changes in standards or quick obsolescence if the technology is not widely accepted. Conversely, waiting too long to abandon an aging technology subjects' organization to costs associated with maintaining systems and products after the larger marketplace passes them by. These are evidenced in the delay of PIA passage 15 years earlier and how it has affected extracting oil and gas production.

There are few decision models for deciding when to transition to a downstream or upstream technology to expand technology adoption. The decision to maintain a given technological framework when technological products and processes are fluid must be linked to understanding the return on investment in information technology.

In view of the foregoing, let us not forget that the ability to absorb a new technology is often less than adequate, both in the new skill sets required and willingness to embrace the new technology. In adopting the new technology, we might be dealing with new technology and using the technology to implement change. Both ways require significant changes to processes and practices, and management may be unwilling to pay the high price for training, its adoption, and implementation. In some cases, employees learn at their expense, which affects morale and prevents the organization from realizing the benefits of the technology.

3.3.7 Poor Measures and Measurement Process

Lack of performance metrics. Change initiatives require significant expenditures to focus on high-leverage issues. Successful change requires organizations to effectively measure results before, during, and after the change. [21] When these metrics are not defined, change initiatives may drift, fail, or be perceived as successful when they are not. Additionally, change initiatives that focus on low-leverage areas should have future high potential to warrant their support. These decisions can only be made with facts and metrics; otherwise, emotional, and political barriers may derail the change efforts.

4. Results and Findings

As could be gleaned from the views canvassed above, it is important to note that change is constant if progress could be made in any venture that could be subject to change. This implies that the following findings are beneficial to the identified research gaps:

(i) The paper shows how various stakeholders and other predictors of change execution can hinder the organization's readiness to embrace change.

(ii) Change readiness, preparedness, and barriers are elements to consider when assessing change management using the portfolio management framework.

(iii) Access to technology by stakeholders enables the integration of the change process at speed.

Conclusion

Organizations with measures of change management capabilities do not effectively use those capabilities. The increase of uncertainty, volatility and turbulence in the business environment increases the difficulty of delivering the expected benefits of the portfolio. Change readiness presupposes an optimal state of acceptance demonstrated by an organization or industry. Organizational systems are considered in their entirety and should not be considered independently. Generally, there are many interdependencies between systems within the petroleum industry, and these should be identified and integrated with the change plan. Change readiness performed at an organizational level provides insights into the interdependencies of the entire system. The paper adds to the available knowledge on how the PIA implementation will likely affect industry players' willingness to change. Hence, this study may provide managers of oil and gas firms and policymakers with takeaway implications on change management to improve preparedness towards change implementation.

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