Robust Governance as Catalyst of Digitalization of Human Capital

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Abstract: *International organizations; be it the clients, consultants or contractors, face the gruelling task of acquiring the right talent for the job or risk cost over-run due to mismanaging resources while executing multiple projects simultaneously. Cost, time and quality of the completed product is governed by the ever changing demand and supply in this industry. This study was conducted in a Malaysian Oil and Gas company in the United Arab Emirates. The purpose of the study is to find a project governance matrix most suited for post-COVID environment. Qualitative findings analyse five key elements in resource management; namely manpower, tools, knowledge, skills, and experience. This paper will discuss a concise view of challenges faced in project management and suggests ways to develop the best approach in tackling the issues of the workforce. Findings indicate that the gaps studied have an equal correlation in producing optimal results. Project management systems demands continuity. Proper governance is the catalyst to a dynamic resource management and efficient project management. Interpretations and conclusions is suited for Oil and Gas project management, but generalized to suit other robust industries.*

Keywords: Oil and Gas, resource planning, governance, local content, technology

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1. Introduction

Remote working, regardless of time is the new norm after the COVID-19 pandemic. The traditional organization chart approach should be dynamic enough to optimize company and client benefits. Working and learning have gone online. Technology has assisted to decrease human error and expenses. Strategic initiatives such as retooling of the Human Capital, and optimizing the knowledge downloading from of the aging workforce will promote sustainability for the industry. To improve overall efficiency and effectiveness, the governance approach must be address coupled with a new strategy. In other word, the Oil and Gas industry must adopt lean manning approach while meeting the Key Performance Indicators (KPIs).

Since the wake of industrial evolution, many organizations and manufacturers adopt technology and machinery as a way to decrease human errors and chase profitability. Dynamic Resource Management (DRM) in Oil and Gas industry is not constant throughout because the projects are never identical, therefore it is a case-to-case decision-making process.

This industry has been affected globally by two major events:
1) COVID-19; Also called the Black Swan effect (Investopedia, 2019)
2) The collapse of the OPEC+ DEAL; Also called the Grey Rhino effect (Lall, R. R. ,2020)

this came after a series of warnings and visible evidence with profound impact to the Oil and Gas market. This industry is facing a double threat of supply and demand loss.

Even with a very skilled project team, a small glitch in global health issues would snowball into a pandemic causing indefinite halt. Buyers may cancel orders. Construction companies may claim for force majeure. A lot of scenarios may result from the Oil price.

This study is conceived from the growing concerns of cost-cutting, optimizing resources, and company sustainability. The scope of governance has to be redefined in order to have a more progressive organization. Moreover, the world is shifting towards clean alternative energy sources as natural minerals begin to deplete. The findings highlighted the loopholes of lagging resources, the cause and effect. Social and psychological aspects derived from respondents were documented and compared to the themes.

2. Literature Review

Demand for skilled workers, especially across knowledge-intensive industries will increase tremendously within the next 10 years. However, the ripple effect of talent shortage will be felt in every industry. With the challenges faced in acquiring the right talent for the job, proper governance plays a crucial role towards:

- Safe and secure resource management,
- environmentally friendly
- Sustainable Output
- Competitive throughout the lifespan of the field/ built facility

During the COVID-19 global lockdown (IEA, 2020) the organisation have been able to maintain performance and deliver results, but with new perspectives and best practices moderately unconstrained by time and place. Some guidelines that the governance department is currently developing:

- Revisit all focus areas, plans, strategies, KPIs, to move ahead as the new norm
- Look into deviations in the organizational standards
- Provisions in new contracts to cater to the new norm (effects of pandemic and global issues)
- Revisit procurement processes and manpower planning for cost optimization

In PETRONAS (Wan Ariffin, W. Z., 2020) the core employees who hold the key positions are Malaysians, but at the same time, they employ a diverse range of talents from all over the world as the process of localising the workforce becomes easy when the need arises at any of their projects outside of Malaysia.. Their training facilities (INSTEP, 2020) holds updated technical training to prepare the local youths.

The Oil and Gas industry is facing skills shortages and an ageing workforce are the top-five barriers to the industry growth (Society of Petroleum Engineers, 2020). After the outbreak of Coronavirus pandemic, seasoned talents are needed even more. The younger generation workers would not have had the physical experience of being on-site therefore lack the dskillset to make an accurate judgement or troubleshoot a problem in situ. In the case of the United Arab Emirates (Al-Ali, J., 2008) mentioned that the local culture may not be compatible with the oil and gas industry. Intercultural sensitivities (News Deeply, 2018) and the local context might be the biggest challenge of employing locally. With the COVID-19 outbreak, risk of virus spread has led global workers to be on lockdown mode, making it almost impossible to find enough talent at a localised area. Workforce Localization poses a big challenge to the

organisation and the project managers; there is no guarantee there is a ready supply of local talents with ready skillsets who can take up the roles required.

The organization chart of most project based teams has evolved significantly. The matrix approach has long replaced the conventional project organisation chart. This kind of matrix employs two chains of command, one along the functional line and the other along with the project, product, or client lines. Other chains of command such as geographic location are also possible. This evolution of organizational structure caters to a definite real-world requirement for an organization capable of managing big-scale and complex programs, projects, and problems, with very limited resources. This could also stem from having good governance. When new and unique problems suddenly arise, the project team can quickly adapt to cushion the impact. Thus the organisation chart is adjusted to ensure good optimum productivity.

With the passing of the recent COVID-19 pandemic, organizational governance is even more crucial to adapt to the New Norm. This pandemic has forced companies to change the way they think and work, and try the achieve the same or more from fewer resources at lower costs. Project managers must orchestrate and deliver projects from an autonomous workforce. In a contactless environment, which is not constrained by time and place. In most cases, it depends on which stage in the project lifecycle it involves. There are four basic stages in a project lifecycle which is of equal importance for consideration for optimum cost planning as follows:
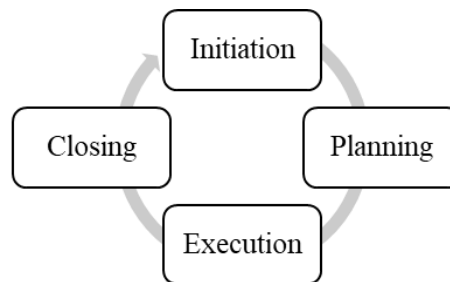
Figure 1: General Project Lifecycle Stage

Each stage has the opportunity to be outsourced to a certain degree depending on the project execution strategy (Watt, A., 2014). The Internet of Things (IoT) can replace costly time spent on travelling (Micotan., 2018). This is important when the project locations are not easily accessible. This is where technology comes into place. Project management software can be costly, but in the long run, it gives a huge return on investment. Commonly used project management software such as Microsoft Project (Microsoft., n.d.) and Primavera P6 (Oracle., n.d.) has preloaded templates to keep projects on track by having the ability to run what-if analysis and forecast resource requirements throughout the project lifecycle. Since Oracle is one of the resource management software used by the studied organisation, the project team has demonstrated that even in various locations globally they have been able to handle social distancing and remote working years before the Coronavirus outbreak.

3. Findings

The study findings suggest the importance of governance in an organization. As the enabler, shaper and regulator of an organisation; governance set the tone in accelerating the transition of digitization and automation. The participants highlighted the need to digitise their work processes and reporting. This means governance is responsible for enabling enhanced operating models and philosophies. This would include setting standards in facilities of the future and next-generation upstream work.

For effective governance, the following points have been highlighted by the participants which are the guidelines and initiatives by the governance to enable dynamic resource management:

Table 1: Summary of guidelines and initiatives by governance

Scope	Initiatives
Talent Management	a. Online competency assessment; such as Job Competency Profiling (JCP)
	b. Internal promotions, mobility, hiring
	c. Staff development programs to continue via other means other than classroom-based or face-to-face training
	d. Digitisation of Lessons Learned and tacit knowledge. Assign a custodian to that subject and establish a virtual training program
	e. Workforce localisation efforts; a guideline of a clear definition of the results to be achieved for the locality and manpower rationale. Guidelines for dependency on external foreign services.
HSSE	a. Virtual consultations with the Oil and Gas operators for enhanced health monitoring power
	b. Open and regular communication with stakeholders.
Technology	a. Online meetings; even before the COVID-19 outbreak governance department has promoted virtual self-governance.
	b. Virtual approvals via the website. Although this was to ease the difficulties of project executors in remote places, this deemed useful during the COVID-19 pandemic.
	c. Virtual activities via internet meeting platforms; such as cost recovery activities, audit, contracts executions, remote meter validation, contract negotiations,
	d. Digital invoice checking; the actual invoice is sent to a central mailbox for checking later on without physical contact of the document.
	e. Enforce regulations/ SOP for virtual meetings platform by using a virtual private network (VPN) for a secure connection.
	f. Strict guideline for online approval of business travel and mobility for really necessary only.
	g. Advice on Work-from-home (WFH) hardware/ tools, assistance/ subsidies for internet/ tools.
	h. Usage of DocuSign for digital signature of documents

This further suggest that technology is the catalyst to a resilient organization due to the fact that:

- technology is needed to increase productivity
- technology reliance has risks
- embracing technology takes time to adapt
- human intelligence cannot be replaced fully by software.
- Using technology to manage resources is the way forward for robust organisations

The participants agreed that embracing technology is crucial for a robust organization, as quoted during the interview session,

> "Less re-work; in terms of the cost, as per schedule. You can meet the production target. Maintain the quality and specifications. That's the reason behind the DCS system being created. If you use the software, you will get identical output and it balances your investment, more profit and easy to achieve production target."

By having a unified digital platform, the organization is able to establish a productive workforce localization initiative. Data findings highlighted the challenges of as follows:

Table 2: Summary of advantage and disadvantages of workforce localization

		Explanation
Advantages	Reduce expatriate failure rates	Some expatriate workers find it difficult to adapt to the local culture and left earlier than expected. It is also a common stress factor that expatriate workers have to train locals to replace their role, hence having added work to their already heavy tasks.
	Improve rapport and confidence	Increases the retention rates and improves government relations
	Reduce costs	It would cost less to employ locals, as the recruiting organisation does not need to allocate a budget for expatriate employment package.
Disadvantages	Time-consuming	The job roles, work schedule, and milestones must be adjusted to fit the local work culture.
	Governing forces	The responsibility falls on both the local government and the organisation to increase the chances of local employability by learning how to adapt these cost-driven organisations.

These challenges are to be tackled in stages as a long-term strategy plan. Understanding the locals, compassion is crucial to attain highly-skilled local workforce. As quoted by a participant,

> "You need to understand people culture, what are their values, do they value time? do they need to go back at 4 p.m. to be with family? do they care about social life, hanging around".

The local infrastructure and work culture may be different in the host country, hence that is an aspect that needs perseverance. As quoted by a participant,

> "We train them, educate them, make them understand our work culture. Make them closer to us. Hopefully, our work culture rubs off on them in time."

Regardless of the current situation, one participant quoted patience as a way to understand the capability of the local candidates:

> " main thing is that you have to be patient. You have to look into the person as to what is their capability, what is their knowledge level then you load him what is suitable".

4. Discussion and Conclusion

In the wake of the current economic crisis, organisations must endure the test of lesser profits. By adopting digitization as means to work and learn, the key management is able to make informed decision of the workforce headcount. Widespread digitalization is creating strong competition for specialist talent so that even if the world faces another health issue the industry is prepared to function without physical proximity. The existing workforce may have to find other ways to be employable. Governance is the shield from external effects of global crisis. To improve the overall efficiency and effectiveness of resource management, the cost structure changes to address the reviewed organization chart with the new strategy.

5. Recommendation

For a better flow of business activities, organisations must promote healthy governance. The focus of authority is at group dynamics, policies, departmental cooperation, and organisational incentive structure. This cushions the pressure from the external environment, customer expectation, the expectation of regulating governance and authority, stakeholders' support and people involved.

Given that the business is shifting towards another source of income (not just upstream alone), the governance body is most suited to advise other business units. This is to have uniformity in structure, objectives and goals. The governance body acts as the shepherd for all sub-units; this is to have a helicopter view of resources that can be shared or collaborated. Governance should be given the dotted line position directly to the organization's head, as illustrated below:
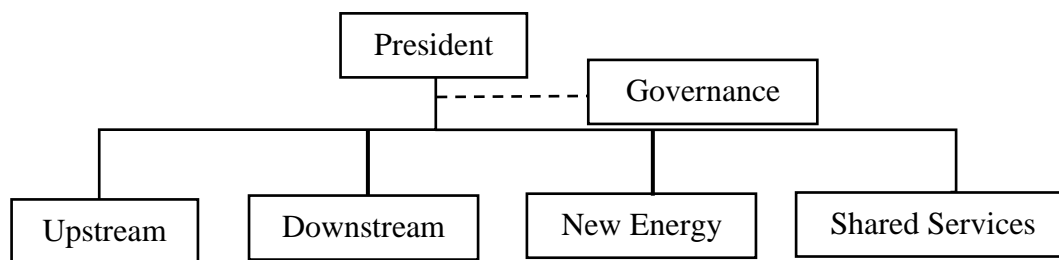

Figure 3: The governance role as suggested by the study findings.

By adopting better governance, the organisation can move at a faster pace, elevate collaboration, sustainable cost efficiency, going digital, self-sufficiency strategy, distributed and flexible workforce. Governance is the catalyst towards shared values and cultural beliefs.

Since the turn of the millennium, much of the thinking and doing is replaced by machines and software. Skill shortage is a common problem which often results in the delay of project completion. Therefore, companies need to focus on upskilling young employees through apprenticeships and workforce training programs. All this is made possible with the aid of technology.

The following figure depicts an ideal governance philosophy of behavioural approach towards a digital mindset:
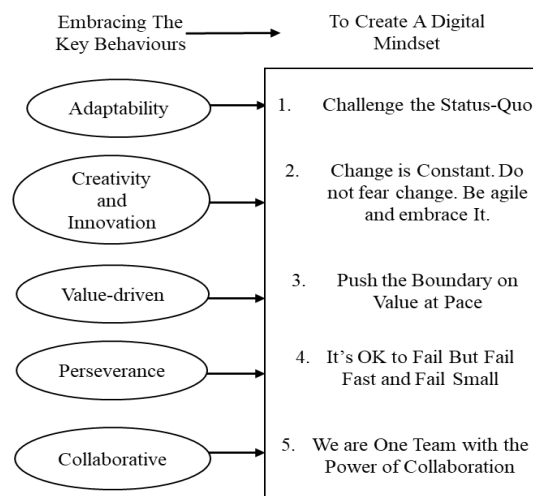
Figure 4: Key Behaviours to Create a Digital Mindset.

This figure explains the psychological requirements to have a smoother adaptation towards a digital transformation.

A major problem for all the companies is knowledge loss when employees retire or leave the company. It is crucial that Oil and Gas project management and construction team to consider for the continuity of the project. In order to optimize the experience of senior workers, organizations can use them as trainers and mentors. Older workers have a wealth of knowledge and experience that they would love to pass on (John Reh, F., 2019) With the use of tools, adapted communication platforms reduces the need for physical and strenuous movement to enable a flexible schedule.

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