

Managing Non-Technical Risk in Exploration and Production (E&P) Projects: Opportunity to leverage the IA Process

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a. Introduction

Oil and gas exploration and production (E&P) activities has progressively shifted to more challenging geographies across the world as the curtains drop on the era of easy oil. Success is therefore largely driven by cutting edge technology such as horizontal multi-directional drilling, subsea technologies that enables oil and gas production in water depths above 1,000metres, 3D technologies to better define subsurface features etc. Although the E&P industry has made giant strides in the technical space, the Industry has not matched technical advancement with capacity to manage critical non-technical challenges. Non-technical issues in oil and gas operations are becoming more complex and the industry need to pay closer attention to how it is managed

b. The concept of Non-technical risks (NTRs)

Non-technical risks (NTR) refer to all risks and opportunities that arise from the interactions of a business with its broad range of external stakeholders. Interactions that could potentially result in stakeholders discontent represent the downside risk dimension while interactions that could potentially result in stakeholders satisfaction represent the upside opportunity dimension. According to Rodriguez (2014) this includes interactions with regulatory, public, socio-economic, governmental and environmental organizations, for the management of related aspects of a project's operations.

The extractive industry is faced with significant NTRs at project and portfolio levels due to the complex operating environment and challenging stakeholder interfaces in regions and geographies where natural resource reserves are found. It is well known that many developing countries across the world (Africa, Latin America, Middle East and Asia) where oil and gas reserves and solid minerals are found, suffer from weak governance, insecurity and high incidence of criminal activities, poor transparency, weak or absence of regulatory framework, human rights abuses and a host of other structural weaknesses. These structural and political defects in the national government make business interfaces extremely difficult, unpredictable and tough to manage. As a result, the ability of E&P companies to extract value from their portfolio is largely dependent on proactive management of NTRs at project and portfolio/country level.

c. Non-technical risk and value erosion

In the extractive industry, profitability and growth is hinged on effective management of a broad spectrum of technical and non-technical risk both to enhance value and also prevent value erosion. It is obvious that the industry has gained a handle on technical risk over the years especially as oil exploration and production activities moved to more challenging terrains. There are clear processes and framework for dealing with technical risk from project identification through to construction; such include hazard identification, hazard and operability studies and other technical safety processes.

The same cannot be said of the management of non-technical risk. Non-technical risks are the most common cause of project delays and most likely to be underestimated and overlooked but have the potential to cause significant erosion of project value when they manifest at project level and in extreme cases significant portfolio value erosion, when they manifest at corporate or industry level. The identification and early management of NTRs such as community grievances, environmental and social safeguards, and alignment with venture partners can significantly improve project NPV as well as enhance company's access to new opportunities. According to Breemer and Mckeeman (2012), NTRs of this nature account for up to 70 -75% of cost and schedule failures in projects in form of schedule delays and cost overruns, local deal opportunities, and a host of stakeholder related issues.

In its study of the cost of company-community conflict in the extractive industry, Davis and Franks (2014) discovered that companies incur substantial cost and value erosion from community disruption. The study identified the most frequent costs as those arising from lost productivity due to temporary shutdowns or delay while the greatest costs of this NTR identified through the research were the opportunity costs in terms of the lost value linked to future projects, expansion plans, or sales that did not go ahead. The costs most often overlooked by companies were indirect costs resulting from staff time being diverted to managing conflict – particularly senior management time, including in some cases that of the CEO.

In his paper, 'Managing human rights impact in a world of converging expectation', John Ruggie (2011) illustrated how a failure to develop cross-functional strategic response to non-technical risks related to social impact can have devastating effect. A company in the extractive industry suffered \$6.5billion value erosion over 24 months due to non-technical risk including community opposition and delays in regulatory approval.

d. Non-technical risk – a misunderstood concept or a poorly managed risk category

Non-technical risks are driven by stakeholders external to projects or E&P operations. Given the widely known consequences of non-technical risk in terms of value erosion and loss of opportunities, why is it then that these categories of risk continue to limit the ability of oil and gas companies to maximize NPV and/or extract maximum value from projects and operations?

First is that non-technical risk does not lend itself to the logic of risk management and quantification the way the extractive industry have managed the technical risk. Because oil

and gas projects are major engineering undertakings, there is the tendency to apply 'engineering' sense to addressing the NTRs or to underestimate its impact on project delivery. Traditional risk management where engineering solutions are applied to problems will not eliminate NTRs. It might be possible through the use of technology to reduce environmental footprint of a project but that does not completely eliminate the social impact and as well as the need to follow environmental framework for managing impact.

Second is the fact that the impact of NTR on project delivery is not easy to quantify. It is often an after-action-review. Hence, the lessons and value erosion would have occurred before it is quantified and understood. This, however, creates opportunity to improve the cycle of project development and ensure more proactive management to enhance value subsequently.

A third factor relates to failure to recognize that a poorly managed stakeholder interface is a major source of NTR and value erosion. For example, failure to manage community relations well could result in prolonged community opposition which in turn leads to denial of planning permit by regulatory agency. All these will result in significant project delays with associated cost overruns. Late submission of application for a regulatory permit could mean the permit is not available when project activity should commence. A structured, proactive approach to stakeholder interface management is therefore critical to NTR management

The fourth relate to project leadership and management. Where the project manager fails to recognize the significance of non-technical risk, the tendency is to focus on the technical challenges which are in the 'comfort zone' of the engineering whiz-kid leading the project. The non-technical issues are then left to the less capable hands within the team.

Lastly, it is possible that the project team and the company have a wrong understanding of what non-technical risk are and hence, unable to figure out how best to deal with it.

Figure 1: Known Sources of non-technical risk



e. Framework for identifying and managing NTRs

- i. Appreciate the external context of the project: Profile emerging issues and uncertainties in the operating environment – socio-economic, security, environmental, political/regulatory, commercial, Health etc. Analyse how these might affect project execution
- ii. Evaluate the risks that stakeholders might deviate from expectation: It is important to identify, assess and document NTRs early on as part of overall project risk management strategy and revalidate at each phase of the project. Starting early allows the project team to focus on priority NTRs and ensures adequate resources are allocated to manage such risk. A common example is community grievances bothering on project site selection; these needs to be dealt with ahead of construction otherwise, project execution might suffer extended disruptions.
- iii. Factor NTR considerations in base plan: Key consideration must be given to NTRs in developing project feasibility/assessment of options. It may become necessary to select a less desirable project site if it is clear that certain non-technical risks might arise during operation of the facility that could result in significant value erosion. It is also important to quantify identified NTRs and ensure the outcomes incorporated in the project base plan, costs and schedule.
- iv. Recognise and mitigate NTR impact: This entails clear outline of exactly how NTRs might impact aspects of the project or overall success of the project. It should also include the probability of occurrence, proactive actions to be taken and recovery measures should such risk materialises.
- v. Assure effectiveness of NTR mitigation: The operating environment is dynamic, periodic revalidation of NTRs and diligent implementation of mitigation plan are two most critical assurance steps that must be followed to ensure NTRs do not become show stoppers.

f. Leveraging IA process to manage NTRs

The Impact Assessment process can be very valuable in managing non-technical risk in many ways. First, the IA process promotes early identification of stakeholders, their needs, interest and concerns. This entails sustained engagement through public participation to achieve convergence of interests. More so that the engagement is often facilitated by third party (regulator) who has some respect among project stakeholders. The project management team can and should leverage this process to understand divergent stakeholder interest that poses risk (NTR) to successful project implementation at this early stage of the IA process.

The purpose of the IA process is to understand stakeholders interests and concerns and ensure that this feedback are incorporated to determine project concept while plans and mitigation are put in place to address any remaining concerns. This means that key NTRs can be identified through this process and factored into project design making it possible to eliminate key NTRs. For example community grievances over noise, emissions, livelihood issues etc. being a key NTR can be eliminated by taking these concerns into consideration during site selection.

The IA process also place premium on diligent implementation of mitigation measures and monitoring, perhaps joint monitoring of implementation with other stakeholders to assure that each stakeholders' interest is respected and protected. This is fundamental to the management of NTRs. It is about maintaining convergence of interest in areas of shared interest between project and its stakeholders on one hand as well as driving towards convergence of interest in areas of divergent interest by transparently engaging on the implementation of impact mitigation measures.

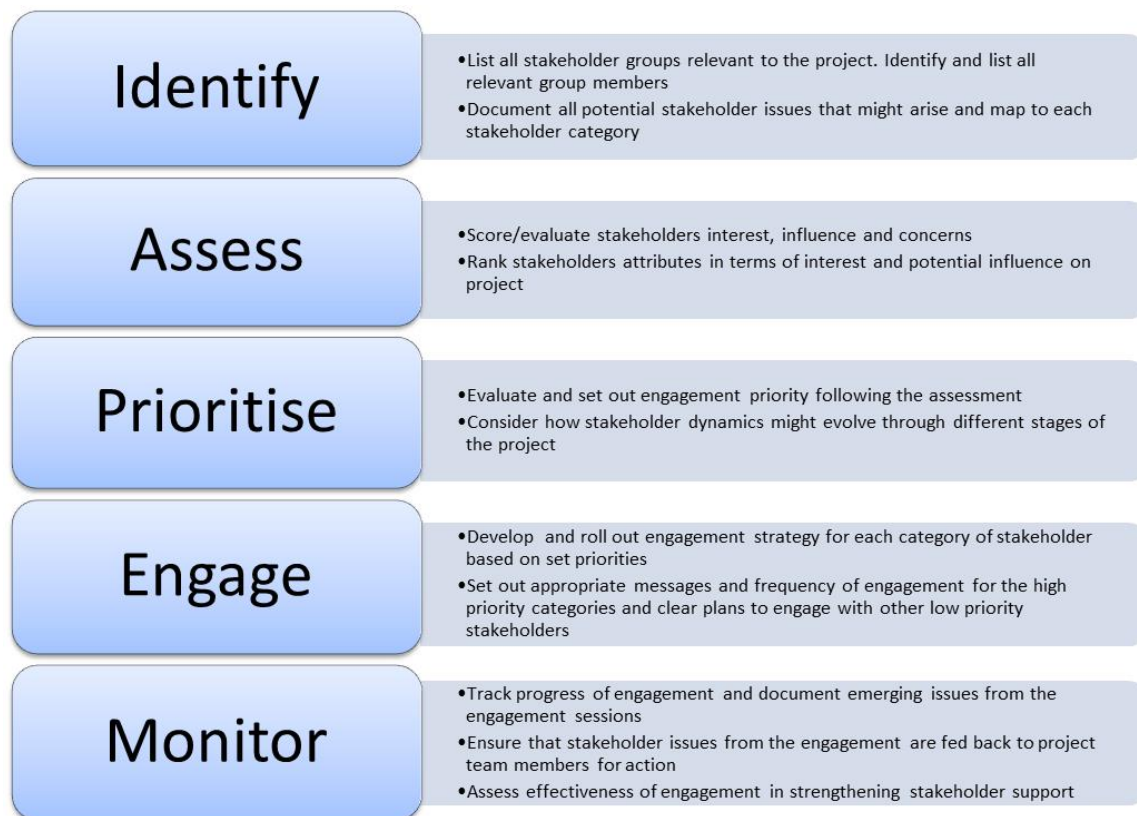


Figure 2: Stakeholder engagement process¹

g. Stakeholder analysis is key to NTR management

It is not enough to outline key NTRs. It is more important to identify and map these risks to the key stakeholders that drive each of them. It is only then that a stakeholder engagement strategy can be put in place. Such strategy and plan should outline potential triggers of each NTR by the affected stakeholder and a course of action to prevent, reduce or mitigate the impact of such risk on the project.

¹ Adapted from Tim Postema 2011: The IAPEM cycle of stakeholder engagement

	NTR classification					
Dimensions	Socio-economic	Security	Environmental	Regulatory/ Political	Health	Commercial
Global	Poverty/inequality, HDI, refugee/migration	Arms proliferation, cross border conflicts, terrorism	Emissions, global warming, waste management	Government aspiration, increasing capacity of NOCs, increasing stakeholder scrutiny	Epidemics and communicable diseases - MERS, Zika, safety	Low oil prices, Iran - prospect for increased supply, global economic slow down
Country	Poverty/inequality, unemployment, acces to energy, resource control, corruption	Violent crimes, conflicts, armed insurgency	Government regulation,discharges pollution, Waste pond, increasing environmental activism, Biodiversity	Election and government policy changes, local content, Acreage bid rounds , changes to regulation	Epidemic, Communicable diseases, road safety	National government approvals, Joint venture arrangements
Company	High community expectation, Legacy issues, community disruptions	Armed conflicts, War, ethnic clashes	Flooding, Environmental footprint, biodiversity	Local content, acreage bidding, Permits and Consents, changing regulation	Community health and safety, communicable diseases, occupational health, road safety	National government approvals, Joint venture arrangements
Stakeholder/ Parties to engage	Local communities, CBOs, NGOs, Government	National government, security agencies	regulatory agencies, Environmetnal activists, local communities	National government, national oil company, regulatory agencies	Ministry of Health, National Imiigration, Health and Safety agency	National Oil company, Major contractors, National government

Figure 3: NTRs mapped to stakeholder segments

h. Conclusion

Good management of NTRs in E&P projects have significant upside potential in terms of NPV realisation and long term success of industry operators. It is certain that effective management of NTRs, in addition to innovative technology, will continue to differentiate oil & gas businesses in the foreseeable future.

The oil and gas industry need to leverage the impact assessment process the more for effective identification and management of non-technical risk

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