



UNIVERSITY OF  
LIVERPOOL

School of  
Management

## **Key Concept Overview**

Project Monitoring and  
Control

**KMG7 713**

**Oil and Gas Management**

**Week 8**

# Key Concept

## Project Monitoring and Control

### **Risk appraisal and management**

Risk is inherent in petroleum exploration and production. It can impact cost, schedule or quality, and therefore risk management needs to be integrated in project management (Van Thuyet, Ogunlana & Dey, 2007; Suslick & Schiozer, 2004). Risk management is used here to mean the set of activities that identify, assess and mitigate the different risks that might affect a project over its life cycle.

Appraising risks is an important and difficult task for oil and gas exploration and production projects. This is in view of the typically long durations of these capital intensive projects. Quantitative and qualitative measures are used in quantifications that support investment decisions, project reviews, etc. This appraisal typically uncovers and assesses the types of threat, the probability of occurrence (rare, frequent, always), the severity of consequence (minor, moderate, major, critical, catastrophic), the detection of effect (low, moderate, high), the potential losses, the value of threat, and expected loss.

Practitioners are increasingly aware of the importance of the supporting cast of contractors and partners in delivering successful projects. Timeliness and context-dependent interactions shape the involvement of these contractors. This ensures that high standards of reliability and quality are maintained. Accordingly, considerations for environmental impact, socioeconomic impact and safety are used in the selection of partners (Inkpen & Moffett, 2011). Environmental risks mean potential threats (e.g. oil spillage) to living organisms and environments, and it is desirable that partners have mechanisms for coping with the effects of these threats. The socioeconomic implications of operations, especially in emerging countries, also need to be considered. Some points include local hiring, local infrastructure and community development projects as well as maintaining heritage and archaeological resources.

The oil and gas industry is particularly typified by safety hazards that include being struck by objects (e.g. tools, debris), inhalation of and contact with dangerous substances, entrapment in pipes and explosions from different petroleum and electrical sources. Thus, safety for workforce becomes the number one priority due to the potential for loss of life. It is therefore no surprise that oil and gas firms identify a safe

working environment as being at the heart of both their *modus operandi* and *modus vivendi*.

## Stakeholder identification

Project risks impact stakeholders. Shared revenues contribute to improved infrastructure, while local hires and investment develops technical competencies and capabilities. Stakeholders hold stakes (interest, right, or share in undertaking) in oil and gas operations and projects. These different forms of stakes are reflected in the involvement and influence of different stakeholders.

According to Inkpen and Moffett (2011), there are four main categories of corporate stakeholders:

1. **Financial stakeholder** – This group involves the shareholders and creditors who are the providers of capital for both investment and operation. Shareholders own the firm and hold titles to the firm's assets and operations in view-owned shares, while creditors provide monetary investment to the firm in return for repayments on the principal amount with interest.
2. **Business stakeholder** – This cluster, also described as the *value chain*, consists of the firm, suppliers and customers. Under contract, the firm buys resources from suppliers and transforms these resources into products (goods and services) that the firm sells to customers.
3. **Internal stakeholder** – This set centres on company employees, including workers and managers that cover all aspects of operations to purchase, process, produce and distribute products.
4. **Social stakeholders** – This group entails communities and the societies that are distant from, but impacted by, the operations/projects of the company.

Other identified stakeholders can include governments, regulators, social and environmental interest groups and nongovernmental organisations (NGOs). Examples of these include:

- **Biodiversity:** Smithsonian Institute, International Union for Conservation of Nature (IUCN), Fauna and Flora International
- **Climate change:** Pew Center, Environmental Defense Fund, World Resources Institute
- **Human rights:** Amnesty International, Danish Institute for Human Rights, Pax Christi International
- **Business integrity:** Transparency International

These different stakeholders have different needs, and the target is often to maintain stable and long-term relationships and partnerships. In some firms, stakeholders are co-opted in the decision making process for corporate citizenship (Garcia & Vredenburg, 2003). Stakeholders can play important roles in negotiations between multinational oil and gas companies and state-owned oil and gas companies, especially in international joint ventures (Brouthers & Bamossy, 1997).

## **Project review**

As projects begin and evolve, there is a need for regular review. These reviews enable the company managers to make people accountable, track progress using existing or developed performance metrics, reprioritise tasks and monitor risks. For project teams, the reviews are a unique opportunity to share experiences, identify potential gaps in competencies and remedy dissatisfaction for work-related issues.

The nature of these reviews varies. It may involve weekly, monthly or annual appraisals that occur over the course of the project life cycle. Reviews may also be triggered by events (e.g. milestones or the end of the project) and interventions to refocus efforts or to deal with specific problems and critical incidents.

Some mechanisms used to ensure effective project reviews include the following:

- **Project review reports** are documentations that offer in-depth assessments of the project. They report on project status against set objectives.
- **Project review meetings** are formal meetings that are held daily, weekly, monthly or periodically (3 to 6 months) to check on developments. At these meetings, buy-ins are re-established according to the assigned tasks and contracts.
- **Post-project reviews** are procedures that analyse and summarise project success or failure. Here, the goal is to capture socioeconomic and technical reviews with details on the positives and negatives at different stages. In this way, the review serves as a learning mechanism for ongoing and future undertakings.

These mechanisms are supported by proprietary and commercial tools and processes that offer templates and checklists to improve their use. Strategically, the project review enables petroleum companies to systematise the performance analysis of their

projects. This is particularly key in capital intensive and mega projects where control on schedules and budgets can get out of hand.

Ultimately, the environmental risks, socioeconomic impact and safety associated with oil and gas exploration and production will require the engagement of stakeholders in project reviews. For this, an ongoing relationship that has been suggested (Van Hinte, Gunton & Day, 2007) is a project review ethos that stimulates open communication, collaboration and trust within oil and gas projects.

**References:**

(Note: The complete citations used in the Key Concept Overview can be found in this week's Learning Resources)