Chapter 11
Missed Opportunities From Misalignment of Project and Operational Requirements

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ABSTRACT

There is a strategic misalignment between project and operational paradigm requirements due to competing and divergent interests resulting in risks from design, construct, and commissioning phases of a project that are transferred to the operational phase of a project life cycle. The risk transfer results from non-alignment of management requirements vertically within an organisation for a total view of risk profile over the full project life cycle. This chapter will explore the issues found from experience and propose structured risk-based solutions for integrating into management requirements that can be measured and monitored for success.

INTRODUCTION

In developing a project, at the end of the day, plants are built from materials that are made into processing facilities that have:

1. A front end (raw materials) storage system.
2. Processing for producing end product.
3. Storage of finished product.

Each of these three areas of the facility consists of equipment having the potential to fail. Whether the failure leads to catastrophic consequences or not depends on the magnitude of the failure, the material handled, and the likely consequences impacting:

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- Occupational health and safety.
- Environmental damage.
- Fire and/or explosion resulting in serious people injury or fatalities.
- Escalated asset damage–internal and external to the facility boundary.

Risk is often defined as the effect of uncertainty on objectives (Risk Management –Principles and guidelines, 2009). Objectives can have different aspects (such as financial, health and safety, and environmental goals) and can apply at different levels (such as strategic, organization-wide, project, product, and process). Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence. There is no such thing as zero risk.

We know from experience that incidents do happen, ranging from minor to very serious. They occur at all stages of a project life cycle. Some examples include:

1. BHP-Vale Samarco tailings dam failure, Brazil (5th November 2015).
2. Montara oil spill, Australia (21st August 2009).
3. BP operated Macondo Prospect blowout, United States of America (20th April 2010).
4. BP Texas City refinery, United States of America (23rd March 2005).

In order to avoid or minimise the potential for a very serious incident to occur, the implementation of a strong and robust risk management program is necessary. To be effective, the risk management program must be owned and endorsed by the Chief Executive Officer and equally applied at all levels within an organisation. The authors believe the risk management program needs to become part of an organisation's fabric to be effective, structurally and culturally. It also needs to be applied diligently with the same effort for new projects (greenfield or brownfield) as in operations. In the authors' view, mistakes at the project stage within a project life cycle could have significant impacts on an organisation during the operational phase. How many of the above-mentioned four examples could have been avoided, or the result significantly reduced, if a robust risk management system had been in place? The answer invariably is all of them. Although it is worth stating that there is no zero risk, measures can be taken to ensure that serious incidents of the above nature are reduced to a level of so far as it is reasonably practicable.

RISK MANAGEMENT FRAMEWORK ISSUES

Based on the authors' experience from undertaking large projects and organisational risk management reviews together with the above examples of serious incidents, many organisations do not have a sound risk management framework that can be applied consistently across:

- Divisions,
- Activities,
- Project life cycles.

This potentially exposes an organisation to serious incidences that result in: