

# Techniques to Support Successful Strategic Project Management in the UK Upstream Oil and Gas Sector

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This article reports on the use of techniques in strategic project management from a survey of the UK oil and gas sector. The article then proposes portfolios of techniques to support successful strategic project management. The portfolios are developed out of previously reported research into the process of strategic project management which uncovered a set of elements that explain successful project management.

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## Introduction

This article reports on a survey of managers in the UK oil and gas sector of their use of techniques in strategic project management. The article then builds on previously reported research to identify portfolios of techniques which appear to support successful strategic project management.

Strategic projects represent the core of corporate growth, change and wealth creation. They are major investments, often involving high uncertainty; they comprise intangible benefits and promise attractive long-term financial outcomes (Buckley, 1998). Strate-

gic projects also motivate the creation, acquisition and development of competencies (Foss, 1997), comprise a collection of diverse options (Amram and Kulatilaka, 1999), and must be conducted in a changeable, uncertain and complex environment (Kaplan and Norton, 1992; Partington, 2000).

Here, strategic project management comprises two main stages: evaluation and control. This is based on Amram and Kulatilaka's (1999) taxonomy and has a clear alignment with classifications proposed by a number of authors in the project management field (Ward and Chapman, 1995; Chapman, 1997; Dawson, 2000; Murray-Webster and Thiry, 2000; Turner, 2000). Evaluation involves framing (*i.e.* drawing up a strategic project after its initial conception), planning and valuing a strategic project, and ends with its authorisation (or not). Control comprises the management, review and redesign of a strategic project through to its completion. A precursor stage involves generating possible projects. Although this is an important and interesting stage, this research focuses only on the evaluation and control of those projects adopted for implementation.

In this study, the set of elements involved in the strategic project management process are divided into *context* elements, *content* elements and *outputs* (Pettigrew, 1997; Dyson and O'Brien, 1998). While the first two categories focus on the description of the strate-

gic project management process and its interrelationships with context and content, the third focuses broadly on the achievement of results.

A key concept in the strategic project management process is the 'critical factor' or 'critical element'. Critical elements should receive constant and careful attention from management, because they drive the organisation to focus attention on the success of the project in hand. According to the Pareto rule, which separates "*the important few from the trivial many*" (Clarke, 1999), if attention is paid to sets of critical elements and their interactions, success is more likely. It is conjectured therefore that there is a set of critical elements that explain a strategic project's success. This proposed set of critical elements is central to this research study and are referred to as 'success elements'.

The above discussion motivated the formulation of the question "*What are the success elements and the role of techniques in facilitating successful strategic project management?*" In order to answer this question an investigation into the strategic project management process in the UK upstream oil and gas sector was undertaken.

This paper is divided into eight sections. The next section summarises the main findings of previously reported research undertaken in the upstream oil and gas sector, on success elements for strategic project management, and management attention. Sections 3 and 4 introduce the techniques and highlight their use and importance in strategic project management according to the respondents of a survey. Sections 5 and 6 develop portfolios of techniques to facilitate strategic project evaluation and control. Section 7 discusses some insights into successful strategic project management. The last section draws out some conclusions, and discusses future research directions.

## Success Elements and Management Attention

Initially semi-structured interviews were undertaken with a diverse group of managers holding top and medium positions in a single company in the upstream oil and gas sector (Asrilhant *et al.*, 2004). Each interviewee suggested a number of relevant elements involved in the strategic project management process. An aggregate list of fifty elements (see Appendix 1) involved in the evaluation and control of strategic projects and their operational definitions emerged from these interviews.

These elements, however, emerged from the business world, and the characteristics of the upstream oil and gas sector exerted some influence on the selection of the elements. For that reason, it was necessary to examine whether these elements are supported

theoretically and the extent to which they are general and comprehensive. First, a correspondence was sought between the proposed elements and theory. The elements were researched in the literature to ensure their completeness and credibility. It emerged that the sets of evaluation and control elements recommended by this investigation have a strong correspondence with diverse, sound bodies of literature (Asrilhant *et al.*, 2004).

It was shown that the proposed elements form a 'balanced' set of process elements and outputs when compared with the four perspectives given by the Balanced Scorecard (financial, external environment, internal business, and learning and innovation) and in accordance with three different categories (context elements, content elements and outputs). This categorisation of the elements highlights their comprehensive and multidimensional nature. The rationale underpinning the balanced set of elements is to secure success across a range of process elements and outputs, by extending the principles introduced by the Balanced Scorecard (Kaplan and Norton, 1992) to the project management process. The balanced sets of elements involved in strategic project evaluation and control are presented in Appendix 2.

Having identified the set of process elements and outputs, the study then concerned itself with the following three questions. First, which elements appear to explain successful strategic project management (success elements), in the sense that they require constant and careful attention from management for a project to be successful? Second, which elements receive that attention in practice? An important follow-up question, then, is how close is the match between the two sets?

To address these questions, a survey was conducted with a range of companies in the relevant sector (Asrilhant *et al.*, 2005). The survey results indicate that a traditional engineering perspective on project management still seems to dominate in the UK upstream oil and gas sector. The sector appears to be attached to financially orientated decisions, focuses on financial issues and seeks to control the efficiency of tangible assets, resists changing current routines and overemphasises shareholders' interests, sometimes at the expense of customers and employees. Additionally great attention is paid to environmental (green) and geological issues. Internal alignment, managerial interaction and resource deployment also play a key role in strategic project management. However, innovative routines, flexibility, interdependency, learning and political, economic, social and market issues do not receive much attention from managers.

The most remarkable research finding of the study was that managers pay considerable attention to a number of elements that do not appear to explain success, such as financial and environmental elements, whilst paying little attention to a number of success

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