

## Sources of Uncertainty and Roadblocks to Successful Implementation of Portfolio Management

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During the late 1980's and early 1990's many major oil companies experienced limited success in their exploration departments. Successful ventures were few and far between. Explorationists, in their search for larger fields began to take on greater risk and subsequently destroyed value rather than creating it.

As a consequence companies began to realize that they needed a systematic and consistent approach to prospect evaluation and portfolio management. The implementation of risk analysis, expected value techniques and decision science tools in the nineties provided them with the ability to make complex decisions about managing business performance. However the convergence of risking, economics and corporate strategy in portfolio management is not without its problems.

Portfolios are large complex projections of the future, based on the information contained within the individual assets selected and as such are very sensitive to estimation and forecasts errors. Users need (1) an understanding of probability theory, (2) consistency in the application and use of ranges for input distributions, and (3) the proper application of output data (mean, percentiles, expected success value etc.). All are susceptible to great error, misunderstanding and quite probably misinterpretation. One must be absolutely sure of the description and interpretation of the individual pieces before they can move on to determining the best combination of options for the portfolio.

In addition roadblocks litter the path to successful implementation of portfolio management techniques in exploration companies. Management themselves provide the biggest stumbling block. Used to 'seat of the pants decisions' they are overwhelmed and sometimes frightened away by the abundance and variety of tools presented to them and the thought that spreadsheets may make future decisions. They develop a 'black-box' syndrome and actually resist change.

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