Evaluating Oil & Gas Assets Through Simulation and Scenario Planning.

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This paper discusses the introduction of system dynamics modeling and scenario planning into planning process at Chevron. These techniques can help planners by providing a integrated, quantitative perspective, filling a gap in the current planning process between the detailed micro-analysis of spreadsheets and the holistic, but less number-oriented forms of decision analysis. Specifically, system dynamics simulations can help planners to manage uncertainty, and view the consequences of investment decisions in different alternative futures.

In this paper we discuss lessons learned from the creation of a pilot simulation focused on gas asset management in Chevron's Nigeria operations. We briefly look at the process by which we wrote our scenarios and built the system dynamics model. We discuss possible ways these types of simulations might be used in the future at Chevron and in the oil & gas industry. Finally we close by presenting several key lessons learned from the pilot at Chevron that could contribute to the success of disseminating these methods across an organization.