

## **Strategic Options Review Model: System Dynamics Supporting 18 Years' of North Sea Oil Strategic Business and Infrastructure Investment Modelling BP**

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STORM (STrategic Options Review Model) is a System Dynamics model developed with BP for forecasting and managing throughput, capacities, cash flow and revenues associated with operating the Forties Pipeline System (FPS) infrastructure and supporting FPS commercial decisions regarding contractual commitments and capital investments. The model development started in 1998 and STORM utilised unique technical approaches for the user interface, integration with Excel, and SD model compiler technology. The model was used in two modes, deterministic (STORM) and probabilistic (PSTORM), the latter allowing Monte Carlo simulation and risk evaluation of contracted throughput versus system capacities based on uncertainty in individual field uptime and throughput variation.

STORM has continued to be used and supported for over 18 years with a number of significant enhancements and overhauls to reflect the changing nature of the FPS infrastructure, expansion of the number of oil fields and changes in business and accounting processes. The presentation will provide a history and overview of STORM, the business needs that it has supported and the technical approaches which have ensured its continued use and development as a business critical tool for BP.

**Mirek Gliniecki**, MSc., is a Director of Strategy Simulation Limited. He has over 24 years' experience of working on business and operational analysis projects developing and delivering decision support tools, models and simulations to inform client strategies, decision making and planning processes. Mirek has developed simulations in many market sectors including projects in pharmaceuticals, IT, defence and oil and gas industries. An expert software developer, he has developed SD compiler technology to support significantly enhanced model run-times and to aid model distribution. He is also the main software architect and developer of MyStrategy simulation software.