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Simulating the World of Oiltanking

Oiltanking pursues a strategy of controlled growth of its tank terminal network through acquisitions, new constructions and upgrades for existing facilities. To support this strategy, Oiltanking planned to use simulation modeling and choose Systems Navigator as its business partner based on many year of experience in the oil and gas industry.

The project is called “Oiltanking Simulation Software” and consisted of a global rollout of a strategic decision support system capable of performing in-depth studies, such as berth occupancy analysis in various terminal configurations and weather patterns. Over 20 terminals are simulated in Argentina, Belgium, Brazil, China, Dubai, India, Indonesia, Malta, The Netherlands, Oman, Panama, Singapore and USA. To maximize the result for Oiltanking, Systems Navigator employees supported simulation workshops and terminal operation analysis to Oiltanking colleagues worldwide.

Global access for Oiltanking analysts

Systems Navigator developed a decision support system for Oiltanking using simulation modeling in combination with Scenario Navigator decision support software. Together they form a powerful combination that is hosted on a central server and can be accessed using an internet login, ensuring maximum flexibility for Oiltanking analysts.

The decision support system is used by Oiltanking to experiment with Oiltanking’s existing terminals, to design new terminals and to optimize terminal infrastructure, amongst others based on the expected throughput of products. This is done for potential expansion projects, greenfield projects and the improvement of current operations. By using simulation modeling Oiltanking is able to include variability, such as weather influences delayed arrivals or terminal operations, changing vessel characteristics, equipment performances or the introduction of new clients at the terminal, mimicking real life and its random occurrences to predict future system performance and to determine how much resource capacities are needed.

About Oiltanking

Oiltanking is one of the world's leading independent storage partners for oils, chemicals, and gases. During the last three decades, Oiltanking has become the world's second-largest company in this competitive field. Its clients include private and state oil companies, refiners, petrochemical companies, and traders in petroleum products and chemicals.

About Systems Navigator

Systems Navigator is an independent consultancy company based in Delft, The Netherlands. Systems Navigator specializes in the design and creation of decision support solutions based on Operations Research technology. Our specific expertise is in using a combination of discrete event simulation and optimization for decision support models that can predict system performance, as well as can be used for operational decision making by means of planning and/or scheduling. Systems Navigator successfully delivered over 50 projects for many storage terminal companies over the world.

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