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## Systems Navigator to optimize performance at ATT Tanjung Bin (ATB) terminal

VTTI's ATT Tanjung Bin (ATB) terminal is a world-class terminal in Johor, Malaysia and forms part of the larger Singapore oil-hub. The current storage capacity is 890,000 cbm and the terminal is able to handle all tanker sizes, including VLCC's. ATB is being constructed in multiple phases. Phase 1 of the ATB oil terminal is designed to handle well over 20 million metric tons of oil products per annum, accommodating 5 seagoing tankers at once, and servicing its customers 24/7/365. The terminal is currently embarking on Phase 2 of the project, developing 20ha of land to create an additional 250,000 m<sup>3</sup> of storage, which is foreseen to be operational by August 2015.

### **Getting ready for the future**

When constructing a terminal in multiple phases it is important that every expansion phase fits the commercial operations at the terminal. By analyzing the logistical boundaries of the terminal the expected commercial performance can be predicted. Systems Navigator used a simulation modeling approach to advise ATB on the impact of various logistical scenarios on future operations. By doing so, the project team is able to minimize construction costs per phase, while ensuring a high level of service to the terminal customers.

In this project Systems Navigator's advice focused on topics such as the optimal berth characteristics in phase 2, the risks and benefits of having dedicated or shared jetty lines, the maximum annual throughput in phase 2 and (future) bottlenecks and how to solve these bottlenecks. As a result of the project terminal performance at the ATT Tanjung Bin (ATB) terminal is optimized, enabling future growth at the terminal.

### **About VTTI**

VTTI is a major player in the storage and terminal business. A 50/50 joint venture between the Vitol Group, one of the world's largest energy traders and MISC, the major Malaysian shipping company, VTTI has 11 terminals, with a total capacity of 8.6 million m<sup>3</sup>, on five continents. Ambitious plans will increase this capacity to 10 million m<sup>3</sup>, with terminals located at the world's major trading hubs.

### **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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