

Case study: An Integrated Availability Model for ADCO's Availability Assurance
 Client: Abu Dhabi Company for Onshore Petroleum Operations (ADCO)
 Location: Abu Dhabi
 Time: 2002 - 2012



Problem

ADCO operates and manages the expanding onshore crude oil production in the Emirate of Abu Dhabi, U.A.E, now at near 2% of world oil production. Their production facilities cover a wide area of the Emirate, with increasing oil production from a growing number of fields. ADCO had been looking for a transparent way to keep control of these developments.

SecuoS approach

Over the course of almost 10 years, current SecuoS consultants have assisted ADCO to assess the future effective capacity for their long term planning, track the actually achieved effective capacity and plan the maintenance and inspection for each forthcoming year, by developing an integrated availability model, together with the ADCO Availability Assurance Team.

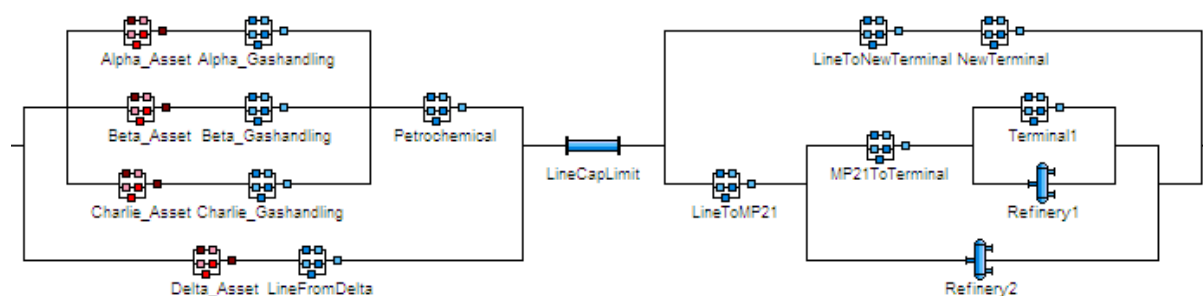
The model was initially developed in 2002 - 2003, by current SecuoS consultants using Shell proprietary tools to assess the future effective capacity for an expansion project.

Three years later the model was further developed for another expansion project. In 2006 - 2007, it was upgraded to capture the actual downtime events of individual wells and the critical surface facilities for tracking the actual production availability.

In 2009, the model was further developed to support maintenance and inspection planning, including the synchronisation and optimisation of major shutdowns and forecasting the production availability for each forthcoming year. The assessment, tracking and planning tasks are the core activities of ADCO's Availability Assurance Team with the objectives to improve the integrated production availability towards 95%.

Outcome

The ADCO corporate availability model has provided the backbone of their integrated asset management system. It has proven to be useful for assessing, tracking and forecasting the maximum and effective capacity and the integrated production availability. The model supports further analysis and stimulation to improve the system availability, particularly when the spare capacity started to decrease.



[Development of an Integrated Availability Model for ADCO's Availability Assurance Program](#)
 by Bambang S. Santoso, ADCO, presented at ADIPEC 2010

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