

Optimizing Oil and Gas Logistics: Streamlining Pipeline & Terminal Scheduling for Maximum Efficiency

Introduction

The client is a Fortune 500 multinational corporation. They have a wide presence almost all over the world in both terminal and pipeline business.

Need

Owing to the challenging economy and increase in the global demand for oil and gas, it has become critical to lower costs to stay competitive in the market, improve performance, and ensure smooth and streamlined operations to meet delivery commitments. An oil and gas production company wanted to address these challenges pertaining to planning, scheduling, terminal & pipeline management, and transportation. It becomes difficult to achieve optimal performance without advanced solutions and automated scheduling technologies. It is operationally challenging to effectively manage increasingly complex pipeline networks that are storing and transporting a diverse mix of products and resources

Solution

Cantata's deep domain knowledge and industry experience led to the implementation of one of the world's few Oil and Gas logistics solutions. It is a windows-based desktop application with client/server architecture) that functions as a liquids/gas scheduling system and addresses the challenges of moving vast amounts of crude oil, gas, and refined products through the huge network of pipelines, providing a central data repository to standardize information management for accounting and marketing groups, operations, engineering, and management within a single application highlighting the key features

- SCADA integration & Realtime Insights
- Schematic: Pictorial representation of a Terminal (having pipeline & Tanks)
- Gantt/Railroad Charts: Graphical representation of scheduled batches
- Simulated Terminal tank tracking, loading/carriers
- Advanced database & reporting functionalities

Advantage

- Increased operational scope, and streamlined processes as per the industry standards
- Reports display injection start/end times for each batch at each supply location, thereby giving real-time visibility of data
- Operational and planning efficiency was improved by 41%
- Easy to integrate with field systems like SCADA to give users end-to-end automated solutions
- Improved accuracy in reporting, and shipping by real-time visibility of data, thereby increasing profitability by 51%

Industry

Oil and gas

Our Services

Midstream Services

Downstream Services

Oil and gas automation

Customer analytics

Technology Stack

C#

WCF

WPF

SQL Server

DevExpress