

## CASE STUDY

# Smooth Sailing: Automated Dock & Berth Scheduling for Hassle-Free Operations



## OVERVIEW

The client is among the world's top oil and gas producers engaged in almost all operations of the industry, including the development, production, and sale of oil, gas, and petroleum products, including petrochemicals, and more.

## CHALLENGES

Our client was concerned about scheduling and planning incoming ships and vessels on docks or berths. Due to the high demurrage costs, it is prudent for them to plan their incoming and outgoing cargoes well in advance to ensure hassle-free dock operations without incurring penalties.

Dock scheduling is a key aspect to consider even before addressing pipeline or terminal scheduling. Various business use cases must be considered before allocating a berth to an incoming vessel.

## SOLUTION

Our experts delved deep into this problem and built a product that provides automatic dock scheduling, factoring in all use cases in its core design.

### INDUSTRY

- Oil & Gas

### SERVICES

- Upstream
- Midstream

### TECHNOLOGY

- C#
- WCF
- WPF
- DevExpress
- Proprietary DB



- **Product** - The product, in its latest use, automatically detects which dock line was used for black oil vs. white oil and makes real-time decisions on dock-line allocation based on the cargo of the incoming vessel. It also factors in any cleaning and maintenance time in case no clean dock line is available for immediate delivery of any product.
- **Terminal Location** - Solution clubs multiple delivery terminals based on common properties into a common location group. All the deliveries are done at the location group level and then, based on the availability of ullage and line fill, our solution determines the final delivery terminal
- **LOA (Length Overall)** - The software will automatically select the most optimized berth for the incoming vessel based on length analysis. If the vessel's LOA > the berth length, the system discards the current berth and searches for the next suitable berth.
- **Current berth availability** - Regarding current berth availability, the application will incorporate ETA (Estimated Time of Arrival) and ETD (Estimated Time of Departure) factors to select the optimal berth for the incoming vessel.

## BENEFITS

- Demurrage costs reduced by 60%.
- Operators could now focus on their primary tasks, thereby increasing customer satisfaction.
- Reduced the scheduling time by 31%.
- Increased the speed of information delivery regarding the last-used products.

## About Contata

Contata Solutions is a trusted leader in technology and digital innovation. Through our work in data engineering, data analytics, machine learning, marketing automation and app development, we deliver solutions that address complex problems in ways that are simple, insightful and impactful.

Our promise and value proposition to our customers is simple: we leverage our deep technical expertise and global presence to bring software products and data-driven decision capabilities to life.

Founded in 2000, Contata is a privately-held company headquartered in Minneapolis that serves clients globally from offices in the United States and India.