Success Story

Optimized Ship Loading at Marine Terminal Immingham

APT optimizes planning, loading, inventory management and administration with OpenTAS®

The challenge of IT systems is that they need to be integrated to be most efficient. Associated Petroleum Terminals (APT) decided to face this challenge. Some time ago APT was looking for a new integrated IT solution to replace the current system as it could no longer meet the requirements. APT has chosen Implico's terminal management and terminal automation system OpenTAS to provide this one-point solution that fulfils all the needs in terms of planning, loading, inventory management and administration of the terminals.

Associated Petroleum Terminals is a joint venture of Phillips 66 and TOTAL located in Immingham, UK on the North Sea coast. The two companies each have a refinery in the area and share terminals to manage their loading and shipping operations. They have 33 different petroleum products and they transport them via sea freight. At four main berths for deep sea vessels and five smaller berths, APT is running a 24/7 operation to load 20 million tonnes per year. APT has 57 employees that work in three shifts.

APT Opts for OpenTAS to Replace Their Outdated IT System

A few years ago APT decided that it was time to substitute their aging IT system with a more efficient integrated solution that could fulfil all their requirements. APT had an IBM business system in place, but it was reaching the end of its lifespan in many ways. It was hard to make changes to the system so that APT started to use spread sheets to record certain data. These spread sheets needed to be updated manually and the information wouldn't feed back into the business system. Support and maintenance of the IBM system started to be a challenge as well.

OpenTAS was selected as it is able to integrate all software programs and spread sheets in use at APT. It automates all the processes at the facility in terms of loading and unloading the ships' cargo including the planning, inventory management and administration. In addition OpenTAS integrates seamlessly with SAP. Both TOTAL and Phillips 66 were already using OpenTAS at various sites and this was a key factor in the decision to use the proven system OpenTAS at APT as well.

OpenTAS is Implemented to Integrate and Automate All Business Processes

Implico began with the implementation of OpenTAS shortly after. The first step was to look at the business processes at APT to be able to create an in-depth gap analysis.

The gap analysis would define what requirements APT had for the OpenTAS system. Based on the outcomes, Implico built a project plan that would be the guideline for the integration and automation of all processes in place. After 13 months OpenTAS was launched.

Key Benefits of the OpenTAS System

The advantages of the OpenTAS system include the improvement of the scheduling processes for berth occupancies to determine which berth is used by which vessel at what time. OpenTAS can automatically receive and upload plans from TOTAL and Phillips 66 so that APT can forecast vessels a month in advance. Being able to plan so far ahead is crucial for the business. OpenTAS provides the necessary automation to keep the planning up to date at all times. APT could have contracts without specifying a certain vessel yet. They just know the approximate size of the vessel, the loading time and the product type. Over time the missing information would be filled in.

APT used to manually enter the data into the scheduling system Seaberth. This is no longer necessary. OpenTAS is able to send the updated specifications automatically to the scheduling system Seaberth seamlessly through an interface. Seaberth then defines which berth can be used for loading and the user has the possibility to refine the

planning further. For example the vessel would be scheduled for loading at berth 6. The user can now decide that to use tank 105 making the planning process more precise.

Another key benefit is the integration of OpenTAS and the existing AllenBradley SCADA system. APT sends orders to the AllenBradley system and receives the loading results back. APT would need to make hourly tank dips and hand-write the results which would then be brought to the accounts department. This is no longer necessary. OpenTAS automatically receives and stores the information, instantly providing a real time inventory of the tanks current holdings. The net gain is that inventory management is improved while also ensuring that products are always available in the right quantities when they are due to be loaded.

OpenTAS provides another advantage by integrating delays that contribute to demurrage. Demurrage is a cost associated with delay in the vessel. Contractually APT has a certain time to load a vessel as agreed between the shareholders and the ship owners. If APT falls outside these time frames then there are costs involved and there is a whole set of rules associated to those. Demurrage costs can be significant and that is why it is very important that APT meticulously logs the delays. They run a time sheet for every vessel in which they record various times for operations with time stamps, e.g. when the ship comes to anchor, when it leaves anchor, when it comes to berth etc. For all of those times APT can enter a delay time and a delay reason. These might be mitigating further circumstances in the demurrage argument.

Another benefit of OpenTAS is increased flexibility in making changes to product names. As APT is a service provider for both TOTAL and Phillips 66 they are dealing with a large variety of products and name changes can happen frequently. OpenTAS allows users to rename products easily and flexibly.

A further advantage of OpenTAS is the automatic generation of forms, custom papers and other documents. This minimizes transmission errors caused by manual input and improves data quality, so that accounting is always accurate and up to date. All data is now in one central location that can be accessed by everybody.
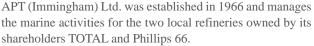
Summary

By choosing Implico's solution OpenTAS, APT was able to bring its IT system up to date. OpenTAS can not only handle all the loading operations of the vessels at the berths, it is an integrated solution that ties in intelligently with APTs existing vessel scheduling and SCADA software. It fulfils all the requirements at APT. "OpenTAS manages all processes from taking the contractual nomination through to the operational service order and then recording the resource of the loading against that and start producing the paper work and conform to Customs" explains Ian Wray, APT Project Manager. "OpenTAS smartly connects systems and processes in one place. That wasn't possible before" adds Stephan Buhre, CEO at Implico.

OpenTAS also ensures consistency with APTs shareholders TOTAL and Phillips 66 who both use OpenTAS and SAP. OpenTAS will tie in seamlessly into their SAP systems so that APT can receive nominations directly from its shareholders. Ian Wray, APT Project Manager is looking forward to the next project with Implico and says "We are planning to work with Implico for the SAP integration next."

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About APT

APT (Immingham) Ltd. was established in 1966 and manages the marine activities for the two local refineries owned by its shareholders TOTAL and Phillips 66.
With its staff of 57, the service provider manages inbound and outbound deliveries of 33 different petroleum products across the marine terminals for the two oil refineries in Immingham. In a 24/7 operation APT loads 20 million tonnes per year.

About Implico

The Implico Group optimizes logistics and business processes for oil and gas downstream companies. The international consulting and software company with its headquarters in Hamburg, Germany, has subsidiaries in North America, Europe and Asia. Founded in 1983, the company today employs around 220 staff.
Implico provides consulting services, data services and software solutions for the entire supply chain – from forecasting and dispatching to data collation. Leading oil and gas companies all over the world trust in Implico's industry expertise and high-performance IT solutions.

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