

UNLOCKING THE DARWINIAN CODE

Unlock the Darwinian code of integrated software solutions and accelerate supply chain profitability to thrive in the oil and gas industry. By ALLISON MCNULTY and NIRMALA ARIFIN

Beyond adapting to incessantly fluctuating crude oil markets and general industry volatility, oil and gas companies need to manage their businesses even more scrupulously than ever before. For example, finding ways to optimize their supply chains and better manage feedstock prices. It is critical to respond quickly to disruptions, capitalize on trading opportunities, and optimize inventory, as well as transportation assets.

In fact, feedstock pricing has never been more vulnerable. A recent example is how Brexit, literally miles away from your gas stations, can swing commodity prices in a matter of hours. Thus, in the name of necessity – we are taking a leaf from the world of biology.

Charles Darwin once said, “It is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change.”

GETTING DATA

Across the oil and gas industry, businesses need to be agile. This can only be achieved by having all the business information and data they need for operational excellence, at their fingertips. Ironically, only by having a bird’s eye view, industry leaders can achieve the required agility to stay ahead of the hungry competition.

For this iron clad approach, businesses need to strive to be the best they can at what they do. This will give them a buffer against unforeseen external shocks and a rock solid foundation to build a strong relationship with customers through solid execution. A well-prepared company is one that customers can trust. Thus, to gain that sharp, resilient



edge, companies need to deploy the latest technology to help mitigate the winds of change. As such, change can either be a friend to your business or a foe that whittles away at your precious bottom-line.

In the petroleum supply chain, large distribution networks operate in a dynamic environment and require instant, accurate information to make decisions about supply, inventory, customer demands, and scheduling. Without an optimized tool set, companies can face growing challenges. For example, they may experience late deliveries, or worse, petrol stations running out of product. Conversely, these stations can also be ordering an excess amount of product. Trucks can also be left to idle due to sub-optimal logistics planning.

Largely driven by a reactionary delivery approach, these insidious challenges cause oil and gas companies to risk leaving a significant amount of money on the table. In some cases, it is caused by scheduling via static spreadsheets. Other challenges include hidden costs

from runouts, retains, and higher transportation costs. Thus, the best industry practice is not to leave your business outcome to chance. It is better to gain control of what works and know exactly what is going on.

DEPLOYING SOFTWARE

This mandates the need for leading oil and gas companies to deploy a leading software solution to manage secondary supply distribution to retail stations and successfully manage different demand patterns by product in this complex environment.

AspenTech’s industry leading proportional replenishment algorithms functionality, as part of the Aspen Fleet Optimizer (AFO) software, considers a wide array of constraints that can be factored into a robust replenishment plan. This includes terminal, tank, truck or cargo constraints, sales forecast by product and by the day of the week, as well as seasonal fluctuations.

To increase the prowess, there is a new functionality called Map Monitor, which is designed for dispatchers to provide an accurate view of the schedule, as it is being executed. With this interactive, web-based mapping application, users can filter groups by date, time period, product, and geography. It also uses color coding, which provides the ability for the user to view which stations have received their product and which deliveries are still being transported.

With this approach, agility is increased by anticipating changes to the supply chain, for example, tracking an out of service truck or late delivery. With a full view of the schedule, dispatchers can also better anticipate unplanned runouts. In the event of a runout, dispatchers can proactively solve the issue by re-routing a truck. Besides building a more agile and efficient petroleum supply chain, the Map Monitor functionality also has the advantage of being integrated with the AFO software and its industry-leading forecasting technology. These advanced functionalities offer insights with active guidance to minimize distribution costs and to optimize commercial outlet opportunities, providing insight and agility to the schedule.

As an immediate proof point, AspenTech's customers have reported



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increased customer satisfaction, improved logistics, and in some cases, a 60% reduction in unplanned runouts. More specifically, the implementation of the Map Monitor functionality improves performance and increases user productivity. With an enhanced usability and visualization tool, users can decrease or even eliminate repetitive tasks. As a result, increased efficiency is achieved.

More arguably, AspenTech is also the only industry provider to seamlessly integrate a business from crude exploration through production (refinery planning and scheduling) and primary distribution planning for terminals, through to secondary distribution. This end-to-end supply chain integration also helps businesses make better decisions and to protect their profits. Organizations can also realize the most profitable schedule to meet demands and maximize margins. With global appeal, the AFO software literally supports more than 20,000 gas stations in China for their scheduling and replenishment needs.

In this constant battle for profits worldwide, integrated solutions offer the required continuous innovation to help oil and gas companies adapt quickly to energy price changes and market fluctuations, resulting in reduce costs and meet customer demand.

Indeed, the Darwinian code has been unlocked - Integrated software solutions are an integral part of promoting the agility required In order to survive - even thrive - in this dynamic environment. ■

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