

# Changing the aviation industry with fuels automation

**N**ow, more than ever, the accurate accountability of one of the largest expenses for any airline or aviation operation – fuel – is critical to its overall success or failure. A common practice throughout the aviation industry is to use manual processes, spreadsheets and multiple disjointed systems to track and manage fuel inventory and distribution. This practice often proves unmanageable and inefficient at an enterprise level, leading to costly errors and over- or under-stocking of fuel inventory.

US-based Delta Air Lines is one company that recognised the need for a centralised system. Serving more than 160 million customers each year, the airline uses a system to aggregate real-time fuel inventory information for all pipeline and storage locations.

Without this visibility, Delta faced challenges tracking and maintaining its inventory levels and supporting its supply and trading strategies. With that in mind, Delta issued a solicitation for a turn-key solution that would maximise technical, function and service needs while providing near real-time data for decision making. This solution would have to track fuel inventories and satisfy logistics management best practices per Delta's requirements.

Based on Coggins International's expertise in automated fuels management, Delta Air Lines chose the company in early 2013 to design, implement and host an enterprise wide inventory management system they call Delta Fuel Inventory Management System (FIMS). This system allows Delta to better control its jet fuel



From Refinery to Fuel Farm to Takeoff, Coggins International is leading the way in Fuels Automation.

inventory through its entire lifecycle and centralises disparate inventory management data from five categories and 14 sources.

This view gives Delta the ability to manage supply based on demand and lower overall cost of fuel storage and handling – saving Delta valuable money and resources. It has been using Delta FIMS to track inventory at over 40 of its largest domestic stations and will soon have more than 50 stations reporting. In order to give Delta the 'big picture', Delta FIMS receives inventory data from five separate vendors

all contracted to manage fuel at the various domestic stations. It also receives pipeline movements from six major US oil companies allowing Delta to forecast fuel inventories up to 10 days out.

Delta FIMS does not stop at tracking inventory. It also gives Delta an advanced means of managing fuel nominations and orders based on usage, forecasts, and current status of fuel both in storage and in transit. The system is designed to evaluate pipeline nominations, flow rates, storage quantities and projected consumption, and provide a 10-day window of projected

inventory. Delta FIMS provides projected inventories for all of Delta's biggest stations, allowing it to make decisions ahead of time rather than reacting to historical data. Another component of Delta FIMS is the Delta Electronic Fuel Service Record (eFSR) programme, which functions as an EPoS sub-system. eFSR consists of a ruggedised handheld computer, an industrial-grade automatic point-of-sale device and a meter register interface – integrated into an enterprise level system to provide paperless fuel ticketing to the flight deck of an aircraft. ■