

Airline Procurement

IT solutions get brighter and bolder every day. Technology that streamlines purchasing, maintenance and supply chain logistics can lead to big savings.

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The IT revolution, which swept through ticketing and distribution in a decade, is making steady progress on a much tougher challenge: Tying together maintenance planners, techs and their suppliers.

Air Canada Maintenance will replace 12 legacy maintenance systems with six modules of Mxi software by early 2010, according to ACM Project Director Steve Bogie. The carrier chose Mxi for several reasons: Solving current challenges while preparing for a more automated future and because Web-based Mxi can be deployed to Air Canada stations around the world.

"The core benefits are consolidation of systems and planning with a single view of the entire fleet," Bogie says. ACM has planned by tail number. Mxi will track components and subcomponents. "It is much more granular," he adds. "There should be less wasted time and effort in planning, and greater predictability should lead to labor savings." He expects IT savings from decommissioning legacy systems.

Outsourcing will be more efficient as large books of job cards are replaced by accurate, digitized instructions to shops. Mxi's supply chain module sends electronic messages compliant with ATA Spec 2000 and 2200 and interfaces with most ACM suppliers.

THE MORE THE MERRIER

Mxi now has 27 customers including Air France, KLM, Lan Chile, Hawaiian Airlines, Qantas Airways and five other airlines. "We have doubled revenue in two years," President Lee Hines says. "There has been a general movement away from legacy systems, especially by large airlines."

Mxi was built from the ground up centered on aviation components. "You can track down to nuts and bolts if you want to," Hines explains. He believes the application suits aviation better than enterprise resource planning systems, although chief information officers seem more comfortable with major ERP providers.

Mxi works with large multitype fleets, enabling fewer planners to handle more planes. Faster planning, e-signatures and wireless communication reduce turn times, keeping aircraft in revenue service. Better tracking keeps parts on aircraft longer. And automation aids compliance, as both regulators and potential purchasers can search databases easily for maintenance records. The program was built with outsourcing heavy checks and engine overhauls in mind. It is accessible with most Web browsers and can exchange information in XML format with other systems. But it does not order parts. Instead it transmits part requirements to the carrier's ERP such as SAP, Oracle or Peoplesoft.

PROFICIENT AND PRECISE

Korean Air recently selected Oracle Complex MRO and Enigma to automate maintenance of airframes, engines and components across its fleet of Airbus and Boeing aircraft. Oracle CMRO does maintenance planning, configuration, engineering and execution while integrating "upward" with other Oracle applications for procurement, human resources, contracting and project management. CMRO integrates "downward" with Enigma to publish job cards for techs and reconcile maintenance documents.

Currently about 15 customers use or are implementing CMRO. HannesSandmeier, VP-development, says it was built for aviation, not adapted from Oracle's Enterprise Asset Management applications. Yet it integrates with Oracle's suite of leading e-business and supply chain applications without the extra work required by independent systems. CMRO only must be adapted to specialized airline systems such as flight operations.

Part demand is generated by CMRO and transmitted by a demand management module to Oracle tools for internal inventory optimization or external supply-chain management, procurement and tracking. Twenty-year-old legacy applications simply cannot integrate as well with external platforms of shops or part suppliers.

When CMRO is integrated with other Oracle applications, upgrading challenges are minor. Oracle releases upgrades of CMRO on the same schedule as other applications.

Oracle hosts CMRO for a significant Latin American carrier, but its other systems are installed on airline servers. Although most users are large carriers, there are a few small customers. Sandmeier is seeing a lot of interest in the last six months, especially in the Asia/Pacific. He believes the Korean decision will prompt other airlines to go forward.



SUBSTANTIAL GAINS

Planning speed is impressive with CMRO. A military customer that once required two engineers three weeks to prepare paperwork for a heavy airframe check now completes this task in 7 min. with one engineer. "This reduces turn times, which are greatly improved for all our customers," Sandmeier says.

Another benefit is better control over configuration. Legacy applications tend to be "siloes," with data stored separately for airframes and engines at both line and base. "The configuration data has not been very complete, to say the least," he notes. One customer installed CMRO in just seven months, but implementation usually takes much longer for cleaning and converting data, changing business processes and training users.

CMRO transmits to Enigma the maintenance tasks to be performed, which skills are needed and when. Then Enigma generates work plans for specific aircraft, explains Marketing & Business Development VP John Snow. "We generate the job cards for exactly what the 777 techs will be working on."

Here again the advantages are speed, productivity and accuracy. Automation reduces manual activity and ensures job cards are consistent. Enigma generates correct job cards, paper or electronic, for both in-house and outsourced maintenance. Mistakes are avoided and inspectors cannot approve work unless all steps are complete and signed off.

Manually generating job cards can take weeks, during which time new Service Bulletins may be issued. Enigma automatically integrates the right SBs for each tail number and can produce a 1,200-page job card in less than 20 sec. The application digitizes all important shop documents and connects them through hyperlinks in one integrated system. "There is no punching it in or copying and pasting it on the PC," Snow emphasizes.

For parts, Enigma provides an Illustrated Parts Catalog for each tail number, ensuring configuration and SBs for individual jets are correct. Techs see only part numbers that apply to a particular aircraft. "This ensures the right part is ordered, reducing mis-orders, without manual work for checking SBs that do not apply," he says.

Snow estimates that Enigma saves 5%-10% of IT costs apart from all other savings. One airline reports that the program eliminated 80% of manual work required to produce job cards. It is used by nine airlines and three maintenance shops. Implementation usually takes about four months.

MOVING ANCILLARIES

IT also is being used to streamline and widen the connection between airline passengers and the nonflight products they buy, thus earning airlines significant ancillary revenue. The first selling opportunity is on airline websites.

Airsavings procures ancillary products and integrates their sale on carrier websites. This relieves airlines of noncore functions and exploits the combined buying power of several carriers. The selling tool, Airplus, is embedded in the website so potential buyers are not bumped to, and lost at, another site.

In 2007 Airsavings earned €6 million (\$9.3 million) in profit for eight carriers including SkyEurope, Spanair, Air Europa and Smartwings. Ancillaries sold included insurance, airport lounges, carbon offsets and hotels.

The company is launching Privilege to sell famous-brand merchandise from firms such as Armani, Adidas and Ray-Ban at discounts of 40%-70%. Airsavings arranges for procurement and pays airlines commissions on sales. Two carriers already have signed up.

CEO Ralph Bejar calls Privilege an "Internet hub" for high-value merchandise seamlessly linked to airline websites. It also allows carriers to offer passengers with unredeemed mileage an opportunity to spend points, relieving the airline of mileage liabilities.

Passengers remain potential customers after boarding. Guestlogix is deploying its point-of-sale devices on Delta Air Lines' fleet and will also put them on Ryanair jets. American Airlines, Alaska Airlines and Germanwings already use GuestLogix. CEO Tom Douramakos estimates it will be available to 600 million passengers each year, nearly a fifth of global traffic.

Guestlogix devices accept cash, credit cards, gift cards and loyalty cards. The company's software tracks and analyzes orders to ensure enough goods are available on each flight. Guestlogix offers products not carried onboard as well; passengers will be able to order from the SkyMall catalogs common on North American flights. The company begins selling rail tickets to Gatwick Express on Zoom flights in June, with POS devices printing barcoded tickets so passengers can avoid ticket lines on the ground.

Douramakos sees potential in Asia for selling receipts for duty-free alcohol onboard with the actual product picked up at exit shops on the ground. The airline earns its cut of sales without stocking or carrying the goods. Theater tickets and restaurant meals are also possibilities. He believes it is possible to sell an average of \$10 per passenger onboard, with 30%-50% of revenue going to airlines.

