Facing up to the IT challenge of offshore helicopter operations

It was important, says Brian P. McDonald, Director Asian Aviation Services (AAR); Management Consultant, SFS Aviation Co., Ltd., to select an MRO solution that could address all of the business’s needs.
Regulations) with enhanced handling, and glass cockpit avionics and displays.
- Our pilots are subject to full flight simulator training and have access to cockpit resource management.
- We use an aircraft and engine HUMS.
- HOMP, FOQA (flight operations quality assurance) and FDM (flight data monitoring) all offer full downloads and analysis.
- We operate aircraft with Performance Class 1/2e having the full ability to climb with full payload from a Heli-Deck in the event of one engine failure.
- We also deploy EGPWS (enhanced ground proximity warning system) and TCAS (traffic alert and collision avoidance system).

CRITICAL IT CHALLENGES
Helicopter operators face a number of critical IT challenges some of which are specific to the sector while others would be recognized across aviation operations and MRO. Because of the nature of our work as well as the environments and locations in which we have to operate, we need to consider staying connected during remote operations. Like all operators and modern businesses, we also need to weed out data silos across the organization and to manage seamless integration with multiple systems. Our MRO functions and backbone functions (finance, HR, procurement...) have to work together and we need to work to reduce resource training duration.

So how do we plan to address and tackle these critical IT challenges?

THE SOLUTIONS THAT WE HAVE IMPLEMENTED
To stay connected while remotely operating we use an offline field maintenance solution (OFMS). We also promote simplicity of operation and reduced resource training duration using role-based WorkSpaces (see figure 1). To ensure global parts visibility and to achieve seamless integration with other systems, we employ real-time stock visibility (see figure 2) globally (see figure 3). We also share data across the organization using RSPRINT+, a seamless implementation methodology, while MRO functions and backbone functions such as finance, HR and procurement work together through one system that connects them all: an aviation solution capable of replacing existing multiple systems.
run through his job card for the day, his licenses, training calendar, etc. all on one single screen, while his manager can view all the approvals, also on a single screen. This concept of ‘cutting through the clutter’ has huge potential in cutting resource training time from a few weeks to just a few days.

The solution we chose answers all of our critical IT challenges and several others at a click of a button. It’s also easy to check stock levels, overhaul status etc. In the example illustrated in figure 3, the pins in red indicate places with low stock level of a particular part while green shows places where the parts are available and ready for dispatch. Blue shows that the parts will be ready in the next 24 hours and are in the last day of the refurbishment process.

**FLEXIBILITY AND MOBILITY**

Our IT solution supports both Apple and Android devices and helps us manage and supervise operations anywhere at any time which is especially useful during remote operations in the middle of the ocean. Having more WorkSpaces on tablets means that users at the right authority level can remove or authorize MRO operations anywhere anytime. Also the risk component of any delay through miscommunication or pre-agreed upon matters is weeded out.

**A SOLUTION MATCHED TO OUR NEEDS**

There was an entire gamut of solutions available from which we have tailor-made our system by selecting relevant modules for immediate use while retaining the option to add more should the need arise in the future. This is the solution that addresses the last of the critical IT challenges we discussed earlier, seamless integration with existing systems and key functions such as HR, procurement etc. The aviation solution we chose is also able to take over our entire business and offer an end to end business solution, including human capital management, and finance and accounting.

The term ‘remote operations’ has always suggested several unmanageable variables for our projects and operations. I see these three (connectivity, global visibility, and training and usage) as the key IT challenges that we face while remotely operating. The solutions that we have selected are capable of making these problems obsolete.