Solution Brief
Transportation and Logistics

OPTIMIZE AIRLINE FLEET MAINTENANCE

ACHIEVE FAST TURNAROUND

Need to reduce the downtime associated with your complex asset maintenance cycles for aircraft? Then take a look at the iMRO application from HCL AXON. It works together with the maintenance, repair, and overhaul functionality in the SAP® ERP application to help you gain real-time visibility into your supply network, accurately forecast demand, and reduce turnaround times. As an SAP-endorsed business solution, iMRO helps improve usability, speed the adoption of technology, reduce data processing time, improve efficiency, improve maintenance cycle times, and lower maintenance costs.

As a maintenance manager, you know that maintaining asset uptime and shortened maintenance cycle times while managing compliance and safety are key measures of your success. You are constantly under pressure to increase efficiency, drive down inventory, and reduce the cost of maintenance. It's a fine balancing act of managing the major process streams for engineering, maintenance operations, supply chain, technical publication, and the people performing maintenance. How do you meet day-to-day tactical needs, position your organization as a world leader in delivering maintenance at the lowest possible cost, and sustain compliance and safety?

With the iMRO application from HCL AXON in combination with the maintenance, repair, and overhaul (MRO) functionality in the SAP® ERP application, you can manage the major processes of your business through a comprehensive aviation maintenance solution. You gain highly detailed global visibility into your MRO supply chain and operations, and you remove the process and information impediments that add cost and slow turnaround times. iMRO is an SAP-endorsed business solution that's powered by the SAP NetWeaver® technology platform, and it extends the powerful functionality already available within the MRO function of SAP ERP. Working in harmony, both solutions enable you to make accurate predictions about your labor, parts, and service demand and gain real-time visibility into your entire supply network. Your maintenance and engineering personnel can have the information they need to streamline maintenance tasks and cost-effectively manage resources – allowing you to lower both operating costs and aircraft downtime.

Remove the Barriers in Maintenance

Many MRO organizations lack the necessary insight into their operations to reduce unplanned activities and delays triggered by factors such as unavailable parts, hangar space, or personnel. When you don't know precisely what resources you have or what maintenance events are required at a given time, you cannot optimize your service schedule. In addition, you may lack process integration within your own operation – not to mention your suppliers' operations – which inhibits cost containment and leads to higher inventory levels. It can even curtail your ability to make informed, timely decisions across your business network.

SAP Global Partner

HCL AXON

With iMRO from HCL AXON and the MRO functionality in SAP ERP, you gain the operational visibility and process integration you need to improve all of these aspects of your MRO operation. The combined solution not only supports your maintenance-related processes, including heavy maintenance, engine or complex asset maintenance, component repair, line maintenance, and spares provisioning; the overall solution also integrates those processes with your back office. In addition, you get support for your diverse fleet, including next-generation aircraft such as the Airbus 380 and the Boeing 787. The following describes the additional advantages that these solutions from HCL AXON and SAP can provide.

Optimize Maintenance Schedules

A solution with SAP ERP and iMRO enables you to gain total control over your maintenance schedule. You have the interactive planning functionality you need to set maintenance schedules that maximize productivity and minimize unforeseen service interruptions, parts outages, and process escapes. Your maintenance events become highly predictable with a sophisticated scheduling engine that considers parts and tools availability, product lifecycle, service bulletins, campaigns, third-party commitments, seasonal usage, actual flight schedules, and forecasting for nonroutine activities. You can forecast your material, tool, and resource requirements based on actual demand rather than historical trends to better allocate limited resources such as hangar space and engineering expertise.

Align Operations to Project Plans

Your planners and engineers can align MRO work schedules on the basis of each aircraft and its equipment maintenance plans. They can automatically generate maintenance work orders, sales orders, and notifications based on the defined work package of each aircraft. In addition, your planners and engineers can track modification- or service-bulletin alerts as well as opportunities to perform deferred defect corrections or planned maintenance events. The iMRO application also provides powerful line-maintenance functions, including electronic work instructions, to enable your engineering teams to execute daily servicing in the field without interruption caused by a lack of information. Your MRO teams can efficiently complete key maintenance tasks including aircraft, engine, or component induction; strip; inspection; disposition; sign-off; defect recording and deferral; and release back to service.

Employ Real-Time Monitoring

The solution with iMRO and SAP ERP supports a planned service operation with real-time monitoring to help predict maintenance issues before they occur. You can constantly monitor aircraft, parts, and other critical resources and quickly react to changes in your MRO business network. Because both solutions are powered by SAP NetWeaver, you have powerful data transfer and data warehousing functionality that enables comprehensive monitoring. In addition, by unifying your technology into a single application landscape, SAP NetWeaver lowers your total cost of ownership.

Track All Aspects of Your Aircraft

By deploying a solution with SAP ERP and iMRO, you can manage electronic records for all aspects of an aircraft, beginning with its initial procurement or lease. These records include maintenance programs, as-maintained structures, as-allowed configurations, modifications, service bulletins, airworthiness directives, repair tasks and schemes, part and serial numbers, maintenance history, and much more. For example, your maintenance engineers can view the complete aircraft structure showing all open and deferred defects using electronic logbook and line-maintenance functionality.

Integrate Technical Publications

Now maintenance planners, technicians, and engineers can get direct access, from within the MRO system, to all service and parts information. With a single source of maintenance information, they can reduce the time required to locate relevant parts and service information and automate the parts and tools procurement process. Linking maintenance planning and aircraft documentation (with tail number effectivity) simplifies task planning and automates job-card generation. Providing instant access to a complete aircraft encyclopedia – including an aircraft maintenance manual, structural repair manual, instrument proficiency check (IPC), and others – has the following benefits:

- Improves fault isolation and troubleshooting
- Helps ensure proper IPC and part selection
- Streamlines the process of identifying defects

- Automates parts and tools location and procurement
- Identifies installation instructions
- Simplifies return-to-service activities

The combined MRO solution can accelerate and improve decision making in the engineering office, at the maintenance bay, and on the flight line, which ultimately drives down aircraft turnaround time.

Manage Inventory Collaboratively

Working together with SAP ERP, the software supports automatic replenishment of inventory with your external supply partners to further streamline inventory management. You can collaborate with your suppliers and subcontractors through interactive scheduling and capacity planning in order to minimize delays, enable on-time deliveries, better leverage inventory availability, and reduce overall turnaround time. Both solutions enable you to accurately track your inventory, whether it resides in warehouses, shops, hangars, or line stations. Using sophisticated inventory optimization algorithms, you can forecast future requirements and stage components throughout your network based on actual and dependent demand indicated by maintenance schedules and historical trends.

Base Decisions on Actual Costs

Understand the true economic value of all the parts in your inventory with insight into purchase price, replacement cost, asset value, shelf life, and other key factors. Armed with this information, you can generate sound fixed-price repair contracts, understand the real value of the parts used at each repair station, and significantly reduce scrapping. You can also manage all of your varied proposals, contracts, and invoices for commercial, military, domestic, and international businesses. You can report in real time on maintenance costs by customer, contract, program, model, fleet, aircraft, line-replaceable unit, project code, location, or work order. In addition, the deployed solutions provide you with the information you need to price and profitably win higher-margin, performance-based contracts for your airline operations and customers.

Link Your Front and Back Office

Now you can handle your MRO business unit as a profit center, by linking maintenance engineering and planning with execution to increase capital efficiency and improve transparency. You can optimize maintenance and supply chain processes – from initial sales order to release back to service – and integrate those processes with costing, billing, and customer support. This way, your engineers can stay focused on core tasks without worrying about excess documentation or additional back-office tasks that cause delays and impact productivity.

Benefits of Clear Business Vision

In short, this solution of SAP ERP and iMRO enables the accurate forecasting of parts based on resource demand, helping you avoid delays, reduce turnaround time, and decrease downtime. You can achieve the following additional benefits:

- Optimal fleet availability and turnaround times due to global insight into available parts and resources, collaborative scheduling and capacity planning, and proactive demand monitoring
- Reduced budget overruns with real-time visibility into supply network and maintenance operations
- Decreased cost through improved planning that eliminates excess inventory across the supply chain
- Increased efficiency by integrating all MRO-related business processes
- Lower total cost of ownership by relying on a single technology infrastructure that integrates powerful data transfer and data warehousing functionality

Find Out More

To learn more about how iMRO from HCL AXON can help you improve aircraft utilization while lowering MRO operating costs, contact your SAP representative today or visit www.hcl-axon.com.

SAP-Endorsed Business Solutions

iMRO from HCL AXON is an SAP-endorsed business solution. SAP-endorsed business solutions are complementary to SAP software offerings, are developed in accordance with SAP development guidelines, and provide additional choices and flexibility for businesses running SAP software. SAP-endorsed business solutions are powered by the SAP NetWeaver technology platform and are offered by SAP partners. With this foundation, iMRO is poised for rapid integration into your enterprise environment, significantly reducing your time to value.

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