ORACLE COMPLEX MAINTENANCE, REPAIR AND OVERHAUL

KEY FEATURES

INCREASE MAINTENANCE PLANNING AND EXECUTION EFFICIENCY THROUGH STANDARD INDUSTRY PROCESSES SUPPORTED BY BEST-IN-CLASS FUNCTIONALITY AND USER EXPERIENCE

• End-to-End Document Control Solution that supports Electronic Document Receiving, Document Management and Publishing including Automation for Engineering and Configuration Data creation and revision
• Complete Life Cycle and Maintenance Compliance tracking of Configurations and Parts
• Most comprehensive Planning solution for Forecasting, Planning and Scheduling fully integrated into Oracle’s Value Chain Products such as Demantra, Inventory Optimization, ASCP and Production Scheduling
• Focused Primary User Workbenches designed to maximize information flow by supporting planning and execution processes and standardizing business processes across Heavy- and Line-Maintenance.
• Complete Engine Shop solution built to support the reduction in engine overhaul turnaround times and increase quality by supporting and considering all major processes within Engine Induction, Disassembly, NDT Testing, Component Routing, Third Party Maintenance, Material Marshalling and Assembly Maintenance.

The true value of any maintenance information system is revealed when complex assets – like aircraft – are down for maintenance. Fast reliable service depends on having the right parts, the right technicians and the right tools on-site, at the right time and place and ready to go.

Oracle Complex Maintenance, Repair & Overhaul (Complex MRO) delivers the total functionality Maintenance, Repair and Overhaul organizations demand to successfully manage their entire maintenance operations. MRO service providers worldwide profit from Complex MRO’s rich core feature set – outperforming traditional best-of-breed-solutions and from an out-of-the-box integration with the most powerful global enterprise application suite in the market today – the Oracle E-Business Suite.

By integrating every component of your MRO operation, Complex MRO provides complete real-time visibility across the entire operation. Users realize a lower cost of ownership since Oracle Complex Maintenance, Repair and Overhaul is part of the Oracle E-Business Suite. It connects and automates the entire flow of your business processes from financials and human resources to complete supply chain management, so your business runs at peak efficiency, worldwide.
Solution Overview

In its core competencies CMRO provides a set of best-in-class functionality to support every maintenance and service process for operators and maintenance providers of complex equipment. The MRO functionality is embedded in Oracle’s eBusiness-Suite to seamlessly integrate the MRO processes with the rest of the enterprise business processes.

In addition Oracle’s open standard technology can be used to connect any external system to complement the core functionality.

Oracle’s complete range of Business Intelligence tools can be utilized for enterprise reporting, ad-hoc queries, analysis dashboards, key performance indicator reports and score cards.

End-to-End Document Control

Through the packaged integration into Enigma 3C, CMRO provides the complete end-to-end process of receiving, managing and publishing of all maintenance relevant OEM documents such as illustrated parts catalogs (IPC), aircraft maintenance manuals (AMM), engine maintenance manuals (EMM), wiring diagram manual (WDM), maintenance planning documents (MPD), airworthiness directives (AD), Service Bulletin (SB), Master Minimum Equipment List (MMEL), etc.

Enigma enables the technical services organization to receive the document in electronic form into Enigma 3C and amend the content with additional and changed information based on internal policies. Documents can be enhanced with tags and effectivities to support fast and easy access for engineers, planners and technician. Upon publishing the documents and revisions are being stored in a central repository and made accessible to every user at the same time.
The integration between CMRO and Enigma 3C automatically creates and revises master configurations based on the published IPC and task and sub-tasks in route management based on the AMM.

Links of every published document are generated in the CMRO user interfaces for easy access of the document in Enigma’s repository for engineers, planners and technicians.

Job cards are generated in CMRO using Enigma’s job card generator giving customer full flexibility in style sheets and job card packaging.

### Configuration Control and Maintenance Compliance

CMRO offers complete life cycle tracking of configurations, parts and maintenance accomplishments.

Configuration changes are validated with position templates and parts change rules, generated from the illustrated parts catalog, and approval workflows in order to provide the necessary control and oversight.

Every parts attribute change or usage recording will be stored for audit purposes.

All maintenance performed is recorded against the part and configuration, with required sign offs at multiple levels are required for full accountability. Quality plans can be enabled for additional compliance recordings and sign off requirements.

### Forecasting, Planning and Scheduling

CMRO provides a range of functionality for strategic forecasting, planning and scheduling and is fully integrated into Oracle’s Value Chain Planning (VCP) suite of applications (Demantra and Advanced Supply Chain Planning). VCP together with input from CMRO enables customers to look at maintenance requirements out in the future, typically 3-5 years and beyond, and provide insight into cost, resource and material impact based on actual and potential changes in the customers operations. Simulation plans can be used to perform what-if analysis in the areas of fleet changes, resource adjustments and various other parameter changes that would impact the maintenance forecast. Different plans can be compared to support decision making about necessary changes to be ready for the future.
Planning in CMRO, 1-3 years out, starts with a process to automatically create maintenance visits for line and heavy maintenance based on operations schedule, forecasted usage and maintenance forecast. Auto visit planning and packaging continuously refines upcoming visits, adjusting to forecast changes. To fine tune the automated rough cut visit plan, CMRO provides specific planning workbenches for heavy maintenance planning (aircrafts etc.), line maintenance planning, complex assembly maintenance planning (Engines) and component maintenance planning (landing gears etc). The workbenches are tailored to efficiently plan the maintenance considering equipment availability (operational plans and planned downtime), facilities, resources capacity and material availability. In addition to the planned maintenance the CMRO planning functionality will also respect forecasted non-routine maintenance requirements based on historical non-routine analysis. Similar to forecasting CMRO is tightly integrated into the Value Chain Planning modules for historical non-routine analysis, resource capacity and material availability calculations.

VCP’s Production Scheduling (PS) application is the main tool for production scheduling. Task with the work break down structure parameters from the visit work package in CMRO are collected into PS and the scheduling engine will calculate the schedule dates for the work orders which will be populated back into CMRO. The PS user interface can be used to view the scheduling results from various different angles and what-if simulations can be run in PS to optimize the work schedule. The production planner will be equipped with a Material Management workbench that provides a holistic of material status, full visibility of required materials, easily identifying material shortages and supports material marshalling. The workbench supports material reservations, inter-organization material transfers, cannibalizations etc. to locate material and drive the supply to the correct work order.
KEY BENEFITS:

CMRO is the largest single vendor of Maintenance, Repair and Overhaul applications in the market. It offers more integrations to peripheral ERP systems, more functionality than boutique point solutions and the most business scenario coverage of any other out-of-the-box solution.

With CMRO, configurations and engineering data can be created and maintained efficiently and accurately saving time and money and guaranteeing consistency throughout the system.

The CMRO planning functionality together with the integration into Value Chain Planning increases accuracy in forecasting, planning and scheduling and provides the functionality to optimize resources, material and costs, ultimately resulting in optimized equipment uptime and customer satisfaction.

Superior user experience combined with the support of state of the art technologies such as handheld devices, enables users to perform their work most efficiently and accurately, optimizing the execution of the business processes and increasing turn around times while reducing labor costs.

Engine Shop

For Operators and Engine Repair Stations CMRO offers a solution covering the complete engine maintenance process including engine and component shop planning, improved reliability analysis, supply chain integration, workscope definition, component and parts marshalling, improved maintenance scheduling and supplier warranty support.

Engine workscope is prepared ahead of time, considering engine trend monitoring and on condition parts handling based on maintenance planning documents and estimated non-routine work.

Configurations can be planned to optimize on wing service life.

Detailed marshalling visibility, coupled with fully integrated supply chain functions including warranty and reservations, help to resolve bottlenecks and increase turn around times.

These new tools transform the engine maintenance and planning process, providing an efficient, easy to use system, designed to optimize engine repairs, reducing burned component green time and maximizing life expectancy.