Performance Based Maintenance

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What is the UGS MRO Solutions Set?

Teamcenter MRO Landscape

- Company Proprietary -

Focus – Configuration Driven MRO
Key characteristics: Compelling need for configuration control, compliance requirements, tight integration needed with product definition

Zone 1
Enterprise Business Management

Zone 2
Repair & Overhaul Work Centers

Zone 3
Supply Center

Zone 4
Operating Experience

Zone 5
In-Service PLM

- Design
- Develop
- Test
- Certify
- Produce

- Title Transfer
- Asset enters service

OEMs
Assets

Initial PLM
Content

In-Service

MRO Foundation

Materials Module

Maintenance Planning & Execution

Reporting & Analytics

Zone: 1

Zone: 2

Zone: 3

Zone: 4

Zone: 5
Why Configuration Driven MRO?

Our Value Proposition for Performance based Maintenance

1. MRO Cycle Time Reductions
   - Removing tasks from critical path
   - Reducing times of tasks on critical path

2. Improved Asset Availability
   - Reduced MRO Cycle Times
   - Improved Predictive Maintenance

3. Improved Productivity
   - Planning & Execution resources
   - Reduced compliance costs

4. Improved use of Working Capital
   - Turns Increase
   - Better Tracking of what’s available and lifing information
   - Better usage of existing inventory
   - Decrease costs by eliminating excess or obsolete inventory
   - Better knowledge of available substitutes and alternates in the right context

Configuration Driven MRO
Why Configuration Driven MRO?

Our Value Proposition for Performance based Maintenance

5. Improved Configuration Management and speed of Change
   - Rapid, targeted incorporations of modifications and upgrades

6. More proactive & less reactive maintenance – learning organization
   - Ability to analyze what is really effective/necessary
   - Improved forecasting

7. Improved Quality of next generation product (DFM)
   - Feedback loop, joining Engineering, Manufacturing, Logistics & Sustainment

8. Enables Service and Performance Based Contracts
   - Demonstrate achievement of contractual metrics (component uptime, reliability, useful life)
   - Ability to adjust maintenance and materials management based on analytics and contract
   - Improved information on operational performance of components & equipment

Configuration Driven MRO
**Configuration Driven MRO**

**Capability**
- Creates and maintains maintenance requirements
- Use asset specific configuration & usage to plan maintenance based on fleet trends
- Creates and maintains work cards, expected configuration impact, resources & materials needed etc.
- Forecasts and plans maintenance activities and dues
Maintenance Planning

- Maintenance Requirements
  - Scheduled - Frequency Driven (Life Characteristic/ Date)
  - On Condition - Fault Code Driven
  - Driven by Part Position
  - Work Instructions to Satisfy Requirement (Work Cards)
Work Cards

- Operations to Satisfy Requirements
- Time and Cost Estimate to Complete Work
- Sign off authority (Inspection Required)
- Tasks Breakdown
- Resource
  - Skills
  - Equipment
  - Tools
  - Indirect Materials
- Maintenance Actions
- Requirements Due Based on Utilization of Asset and Frequency of Requirements
- Unscheduled (Discrepancies)
- Deferred Maintenance
- Forecasting
- Work Scope Definition
- Scheduling
Configuration Driven MRO

**Capability**

- Maintenance supervisors can assign work orders to technicians
- Technicians can see job cards, list bills of materials, request parts, add discrepancy reports for unscheduled work, check for warranty parts.
- Capturing of modification, maintenance & repair data
- Maintaining accurate configuration & usage data
- Repair order submittal & material disposition
- External Execution Activities Management

![System Login](image)
External Maintenance Activities

- Capture of Historical Service Events
- Classification of Events
- Record Service Event Actions
  - Who, What, When, Where, Why
- Configuration Incorporation
  - Managing AS-Maintained Configuration
- Maintenance Record
  - Reporting
Internal Maintenance Activities

- Work Scope Definition
- Resource Allocation
  - Tool, Equipment, Spares, Consumables, People
- Maintenance Scheduling/Tracking
- Costing
  - Estimate/Actual
- Compliance Tracking
- Configuration Incorporation
  - Managing AS-Maintained Configuration
- Maintenance Record
- Reporting
Questions and Answer