



SAP and the IHS MRO Inventory Optimizer

Maintenance (MRO) Inventory Decision Support Service



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SAP – The ERP

SAP, is a highly regarded Enterprise Resource Planning system capable of performing just about every phase of a corporation's daily business requirements. Accounting transactions, production planning, maintenance planning, purchasing and inventory stocking among many other functions run on the SAP platform. Corporations implement SAP across the organization to enhance visibility and create commonality among facilities. While this robust ERP system appears to be all things to all disciplines, the highly complex nature of maintenance inventories requires a special competency to combine with SAP to reap savings and decision support that has never been present before. This competency is delivered through the IHS MRO Inventory Optimizer.

SAP does manage maintenance inventories – to a point - but proper management can be laborious. We know this because textbooks have been published on the subject and companies have had consultants design special spreadsheets to consolidate the information. SAP provides the user with many options, but extensive knowledge is required to use the tool to its full potential. SAP is also a very large infrastructure that will nest the use of one function in another and this may cause conflicts. An initial ABC inventory categorization requires subjective and manual input. Ordering mechanics and lead times must be manually entered as well. And perhaps most importantly, each item must be manually reassessed in view of changes in business cycles or facility production rates. Maintenance inventories consist of thousand or hundreds of thousands of spare parts and this task is daunting to say the least, often requiring the support of costly consultants.

The IHS MRO Inventory Optimizer is a decision support service designed to work in conjunction with SAP to deliver

optimum results. IHS is an SAP Content Partner, and the IHS MRO Inventory Optimizer has a large customer base running many diverse ERP systems and SAP leads the way. The IHS MRO Inventory Optimizer is distinct from all other competitors and ERP systems – because it is a simple service, focused on a client's results. The IHS MRO Inventory Optimizer Service analyzes the transactional data, returns recommendations, collaborates with client's business rules, creates benchmark KPIs and action lists, audits results and has very competent people available 24/7 to ensure client success. All items in inventory are reassessed automatically and dynamically on a monthly basis.

New capabilities of the IHS MRO Inventory Optimizer include:

- MRO decision framework applied to every MRO SKU every month
- Multi-layer sporadic and frequent use MRO decision logic allowing for management by exception
- Robust classification system based upon MRO Throughput
- RDRP™ - Recursive Demand Recognition Procedures – identifies minimum stocking requirements based upon repetitive usage occurrence.
- Automated decision logic for: Kits, Assemblies, Rotables, Repairable, Critical, Inspected, Seasonal, Consigned, and Bulk Items.
- Connected decision logic for combined items, superseded items, and enterprise inventory sharing.
- Inclusion/exclusion ordering extensions for projects, outages, and catastrophic events
- Blanket order and blanket item analysis
- 7 level lead time analysis and investment impact details
- ARET™ - Advanced Risk Evaluation Technology - stock out root cause analysis

Delivered Results:

- Client control of rate of implementation
- Item analysis and management
- MRO item disposition support
- Recommended ordering values on a monthly basis
- Risk analysis
- Process analytics
- Cancelable PO's
- Pricing sensitivity
- Returnable items



Thousands of “what if” scenarios including:

- What happens to inventory investment if material availability was set to 100%?
- What happens to inventory investment if non-critical items had a material availability of 80%?
- If throughput were to decrease by X, what would the inventory investment look like in the next year?
- If all project consumption was included in suggested ordering value calculations, what will the inventory investment look like?
- If volume increases by X in Y months, at what rate would investment change?
- What would happen to the ordering values if lead times were reduced by X?
- What does the overall inventory look like if repairable items were analyzed separately?
- What would be suggested if items were to be purchased only 4 times a year?
- What would happen if items were purchased more than 18 times a year?
- What would the inventory investment look like if the IHS MRO Inventory Optimizer managed all items that had any movement?
- What would the effect on lead times and ordering values be if lead times were calculated using all purchase receipt history?
- What would the effect on lead times and ordering values be if lead times were calculated using only the last receipt?
- What would the effect on lead times and ordering values be if lead times were calculated with X days added to the receipt?

IHS MRO Inventory Optimizer - The Service

The Process

The IHS MRO Inventory Optimizer Service is based on two important business tenets – simplicity and visibility. The client uses the xIO™/SAP Data Extraction Utility to access the required data fields and transport to the IHS analyst. Within four business days the results are available for upload into the client’s ERP system. The xIO™/SAP data import utility complies with all client business rules as established in SAP’s workflow. Once an item’s recommendations are reviewed and accepted, the IHS MRO Inventory Optimizer Service will update requirements every month. Results are available in many user friendly reports any time via a web based reporting venue.

The analysis

Maintenance inventories present unique challenges in many forms. When to buy what? How many? What happened to the lead time? Rotables? Repaired item management? compose just some of the constant concerns. The IHS MRO Inventory Optimizer uses complex algorithms and RDRP (Recursive Demand Recognition Procedures) among other technologies to deliver proven results. The analysis is performed in a totally secure environment by IHS analysts who are assigned to each specific client.



The recommendations

Ordering mechanics recommendations are returned in spreadsheet format for review by the client and adopted into the ERP system. This process may require a day or so per month initially, but quickly reduces to a few hours after confidence is earned. Once accepted, it is not necessary to review the item again. The goal is to have the IHS MRO Inventory Optimizer handle the mundane tasks and let the procurement personnel move to more important things like contract negotiation etc.

The benchmarks

Due to its complexities, maintenance inventories were the last portion of a business to receive benchmark and KPI functionality. Turns and throughput were about the only measurable transactions prior to the IHS MRO Inventory Optimizer. Over sixty important bench marks are available now to the user. The "Rules Engine" allows for almost unlimited "What if?" scenarios to be created specifically on request, and repeated monthly.

The action/task list

The IHS MRO Inventory Optimizer is able to sort the inventory data and present it in Action List format. The user can immediately see which items are about to stock out, why they stocked out, how many are truly needed and many more. The client is responsible for pursuing the benefit in these situations. However IHS analysts can work collaboratively with the client to determine a task list and responsibilities to be addressed by both IHS and the client. This more aggressive method is proving to be the most effective with clients often obtaining less than a three month payback on the service.

The audit

Today's manufacturing "Best Practice" environment is driven by repeatability and reason. The IHS MRO Inventory Optimizer presents an audit trail of decisions made – for every transaction from initial implementation. Reports such as Base Month Comparison and Compliance Purchasing offer the corporate decision maker the support needed to answer the "What have you done for me lately and why?" question.

The support

Analysts are assigned to a specific client and available 24/7. All that is required for implementation is a 2-3 day workshop where corporate goals are established, parameters are set to determine material availability, turn targets, lead time calculation methods, critical item availability and more. The last day of the workshop consists of a collaboration between individuals from procurement, maintenance, the stock room and the IHS analyst to discuss and adopt the ordering mechanics on hundreds of the most important items. There is no consulting engagement, but analysts are available should other supply chain enhancement initiatives such as VMI need collaboration with the IHS MRO Inventory Optimizer.

SAP is the acknowledged leader in the ERP field and IHS MRO Inventory Optimizer has become the leader in maintenance inventory decision support. Together we drive visibility, results, savings and Best Practice. Excellent software with client centric support – truly a great service – and not available in any other team combination.



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