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Collaborative Asset Management enables Strategic MRO e-Procurement

Overview

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Collaborative Asset Management (CAM) enables Strategic MRO e-Procurement

Summary

Strategic Maintenance Repair Operations (MRO) procurement is the high-risk, high-value category of MRO procurement that applies to highly engineered product OEMs. E-procurement applications that address tactical, spot-buy and high-volume MRO are not designed to handle the complexity and collaboration required for strategic MRO procurement. Collaborative Asset Management (CAM) opens the door to capturing the hidden value in strategic MRO. Original Equipment Manufacturers (OEMs) will be the driver behind CAM. As OEMs form strategic partnerships with their customers, the bundling of products and services will become the foundation of CAM, which will help build the differentiator against third party parts and service competitors.

Strategic MRO has not been Addressed

AMR Research's survey of over a dozen manufacturers in capital-intensive industries found that over 50% have comprehensive projects to reduce MRO procurement costs. However, as shown in Figure 1, none cover mission-critical, or strategic, MRO.

- More than half of the manufacturers have already outsourced the procurement of their non-strategic MRO procurement and/or made significant investments in e-procurement applications from vendors such as Ariba and Commerce One. Most of these projects target high-volume MRO items, such as office supplies and generic industrial MRO.



Figure 1: Coverage of existing MRO procurement projects
Source: AMR Research, 2001

- Event or maintenance workflow-initiated MRO procurement is often driven by Enterprise Asset Management (EAM) systems from vendors such as MRO Software (formerly PSDI) or Datastream Systems. EAM-driven e-procurement implementations may include the procurement of mission-critical MRO items, such as OEM spare parts, but the approach is tactical, not strategic.
- Complex, mission-critical OEM products such as rotating equipment, mobile equipment, and automation equipment fall outside of existing procurement projects. Most manufacturers will negotiate volume-based buying contracts on a project-by-project basis. But once the products are installed, the approach becomes primarily tactical.

Unique Challenges in Strategic MRO Procurement

For strategic MRO, the decisions on what equipment to buy and which parts to stock are often made by project engineers at the time of plant design and construction. Once new capital equipment is operational, the emphasis shifts from procurement cost to keeping the plant running.

- The risk and complexity associated with managing installed assets often leads engineers and maintenance technicians to adhere to strict engineering standards and maintaining a large quantity of spare parts. The result is a tactical approach to strategic MRO management.
- In an attempt to reduce costs, manufacturers will explore opportunities to source strategic MRO parts from a non-OEM supplier. The decision requires both an extensive engineering review and a formal supplier selection process. However, the internal business process cost involved often limits the benefits gained from price reductions.
- Most significantly, the procurement department defers to the engineering department with regards to strategic MRO procurement, yet enterprise-wide strategic MRO procurement costs are often hidden from the engineering department.

Strategic MRO procurement is high-risk and high-value

Indirect, or MRO, procurement can be segmented into four categories according to the risk associated with product use and the opportunity for capturing value through business process improvements as illustrated in Figure 2.

- Spot-Buy MRO--These products are not usually planned purchases and their value is relatively low. Spot-buy MRO products are also low risk: they have no impact on manufacturing operations.
- Tactical MRO--These products are crucial to the operation but inherently present little opportunity for improvement. Relationships with suppliers are often fixed because of geography or existing fixed capital investments.
- High-Volume MRO--The procurement and inventory costs associated with these products can be reduced, but the products are not mission-critical. This is the low hanging fruit category of MRO procurement.
- Strategic MRO--This is where high risk and high potential value capture intersect. For strategic MRO, the consequences of using the wrong product or not having the right expertise could include costly unplanned downtime, damage to expensive equipment, personnel injury, and environmental damage. At the same time, strategic MRO procurement can help you reduce the total cost of asset ownership.

Definition of Maintenance, Repair, and Operations

MRO refers to any product or service that is procured and used to support the maintenance, repair, and operations of a manufacturing organization. It encompasses any material that is not a direct input into the final product. No distinction is made between supplies bought on expense and supplies bought under capital budgets; however, procurement made under major capital projects is not included. For example, a new pump to support the existing operation and paid for out of the capital budget is MRO, but significant new capital investment, such as a new operating unit, is not.



Figure 2: MRO category as a function of organizational risk and potential value capture
 Source: AMR Research, 2001

Complexity and collaboration required for strategic MRO procurement

The complexity inherent in strategic MRO forces manufacturers to work closely with equipment OEMs and third-party subject matter experts to maintain assets and make the best procurement decisions. None of the leading e-procurement products addresses strategic MRO complexity, much less the collaborative work process associated with it. Figure 3 illustrates the position of the most widely adopted e-procurement products in relation to product/process complexity.

- Corporate e-procurement vendors, such as Ariba, Commerce One, and RightWorks, provide buyers with applications for automating the procurement process. The applications also provide integration with internal business processes, content aggregation, and transaction-based punchout to external catalogs or Business-to-Business (B2B) marketplaces. Yet these applications do not attempt to address the complexity inherent in engineered products.
- Asset management system integration is the driver for adopting the e-procurement products of EAM vendors, including Datastream Systems, MRO Software, and SAP. The asset management vendors bring familiarity with industrial MRO and maintenance management systems to the MRO procurement process. However, collaborative business processes, such as vendor-assisted maintenance, fall outside their scope.
- MRO-centric B2B marketplaces and Web-enabled distributors are firmly rooted in catalog-based MRO procurement. They alternately compete and partner with the software vendors. For example, MRO Software worked with distributor Grainger on the latter's B2B marketplace.

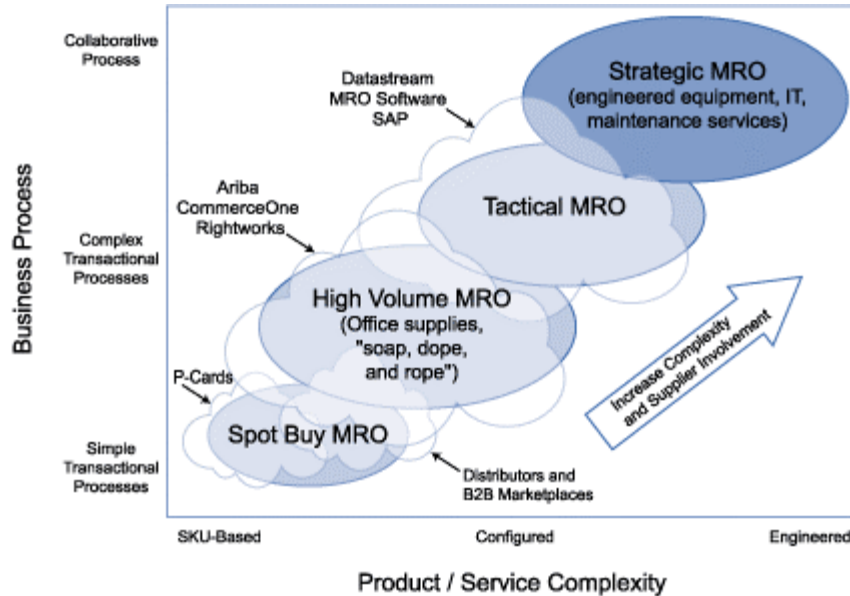


Figure 3: E-procurement products as a function of product and process complexity
 Source: AMR Research, 2001

Collaborative asset management opens the door to capturing the hidden value in strategic MRO

The Internet enables real-time collaboration with business partners, including OEMs, and anytime/anywhere access to information. For capital-intensive industries it also makes possible a new approach to asset management and strategic MRO procurement: Collaborative Asset Management (CAM). Figure 4 illustrates how, short of complete maintenance outsourcing, CAM is the only approach that can deliver the benefits locked up in strategic MRO and the assets it supports.

- Business Process Improvement (BPI) and supplier rationalization projects have successfully delivered benefits, ranging from improving transaction efficiency to reducing prices to eliminating maverick buying for the spot buy and high-volume MRO categories. However, they do not adequately address the risk associated with strategic MRO.
- Stores outsourcing is an acceptable approach for *soap, dope, and rope*, and Vendor-Managed Inventory (VMI) works well for tactical MRO, such as industrial gases. Both approaches reduce working capital and procurement costs, but they have limited impact on total asset lifecycle costs.
- Current approaches fail to address the biggest opportunities hidden in strategic MRO: improving asset performance and reducing its complete lifecycle cost. By enabling real-time collaboration with external business partners, CAM can deliver these elusive benefits.

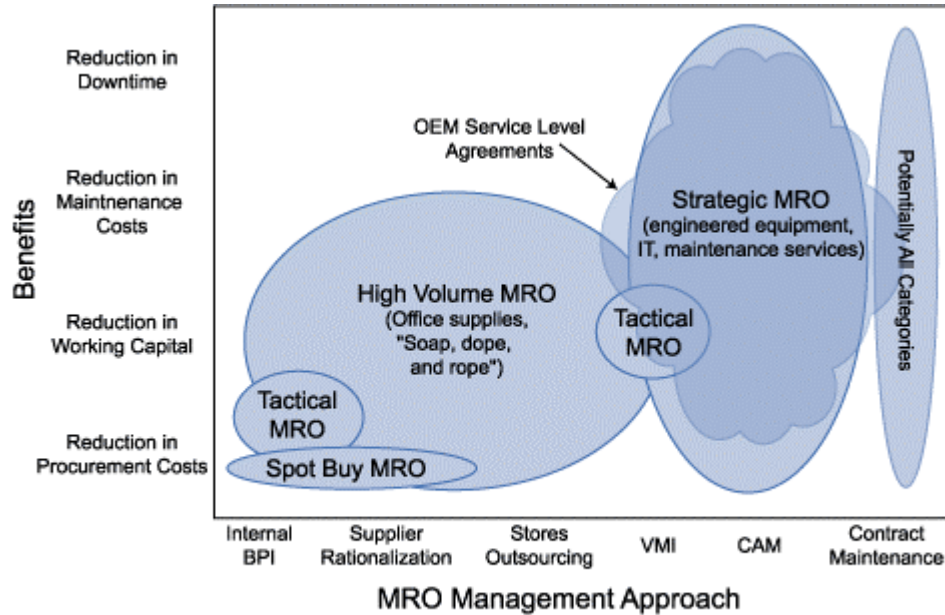


Figure 4: MRO benefits as a function of MRO management approach
 Source: AMR Research, 2001

OEM Product-service bundling becomes the foundation for CAM

Visionary OEMs are making the changes, such as bundling products and service, necessary to become their customers' strategic partners. They recognize that their customers no longer want to be equipment experts--they want the OEM to provide that service. Returning to Figure 4, the new Service-Level Agreements (SLAs) that bundle products and services can become the foundation for CAM.

Recommendations

The answer to the strategic MRO procurement challenge is CAM.

- **Buyers:** Evaluate your strategic MRO opportunities and include your OEMs in the evaluation process.
- **OEMs:** Create product-service offerings and take the lead in becoming your customers' strategic partner.
- **All:** Look beyond the standard MRO e-procurement products to software products and services that can support CAM

Conclusion

Strategic MRO procurement is the high-risk, high-value category of MRO procurement. E-procurement applications that address tactical, spot-buy and high-volume MRO are not designed to handle the complexity and collaboration required for strategic MRO procurement. Collaborative Asset Management (CAM) opens the door to capturing the hidden value in strategic MRO. Original Equipment Manufacturers (OEMs) will be the driver behind CAM. As OEMs form strategic partnerships with their customers, the bundling of products and services will become the foundation of CAM, which will help build the differentiator against third party parts and service competitors.