Most successful companies strive to optimize a supply chain which removes waste, and promotes productivity.

Organizations adopt Lean Supply Chain Management processes to ensure that operations are efficient, low cost, and generate the highest level of customer satisfaction. There are three levels of activity on which Lean Supply Chain Management focuses:

- **Strategic**: At this level, management will be looking at high level strategic decisions concerning the whole organization, such as the size and location of manufacturing sites, partnerships with suppliers, products to be manufactured, and sales.

- **Tactical**: Tactical decisions focus on adopting measures that will produce cost benefits such as using industry best practices, developing a purchasing strategy with favored suppliers, working with logistics companies to save on shipping costs, and developing warehouse strategies to reduce the cost of storing inventory.

- **Operational**: Decisions at this level effect how the products move through the supply chain. Operational decisions involve scheduling changes to production, purchasing agreements with suppliers, taking orders from customers, and moving products through the warehouse.

The removal or replacement of inefficient processes is the core concept of lean business practices.

Four key categories where cost-savings can occur are:

- **Order Processing**
- **Inventory and Raw Materials**
- **Material Acquisition**
- **Payments**

Managing MRO materials is disproportionately complex and costly

When sourcing and managing MRO materials, numerous steps must occur efficiently and accurately. This is one reason why unnecessary emergencies frequently arise. Too often the CEO, CFO, and other executive level managers are involved in the MRO management process. An in depth analysis of one typical MRO Management operation identified the following:

1. New requirements arise from a new process or customer order
2. Material specifications are reviewed and researched to determine what type of materials are needed
3. A search for the material(s) is required to locate suppliers and determine price and availability
4. Suppliers are now added to the ERP system
5. Orders are placed (along with hundreds of others each month)
6. Materials are shipped and received
7. Attention is required to ensure material is marked correctly and has adequate shelf life
8. Material is entered into the stock area for storage
9. Material is tracked during use and purchasing notified when low stock levels occur
10. The cycle is repeated
These processes rarely run as planned – especially because MRO items are typically not listed on the original Bill of Materials, or managed by one individual. Because these items are not tracked they are often the first to run out or expire, causing interruptions in production and creating confusion and fire drills in order to get production started again. Consider just a few of the associated risks and costs.

- Setting up new suppliers is time consuming, costly, and redundant
- Supporting numerous vendors, POs, shipments, invoices and payments is wasteful
- Short shelf life creates added scrap and waste
- Complicated logistics leads to over stocking
- Line-down work stoppages are extremely costly
- Jobs are delayed or short shipped; increasing WIP, lowering margins, and angering customers

Following months of research, Murray Percival Company has introduced their new Enhanced Vendor Partnership (EVP) program. EVP is an MRO focused, demand driven automated replenishment system designed to positively impact supply chain operating margins. It features track and trace automation to replenish inventory, cut costs, and reduce waste.

The EVP program has proven to reduce purchase orders, expired material, inventory levels, inventory shortages and freight costs. The integral scan, track, and replenishment process streamlines procurement and eliminates non value added tasks.

Case Study Example. Empirical Data
Let’s review some real numbers. Company “XYZ” spends about $500,000 annually on MR. products. Murray Percival has partnered with Company “XYZ” with the expectation of supplying half of that total ($250,000). This is based on the type and quantity of products being purchased.

After one year of support the EVP Program has already proven its value.

PO Processing
Company “XYZ” determined that the average cost of creating a purchase order was $125.00. This value includes creating, printing, posting, reviewing, matching invoices, handling discrepancies, and closing each PO. By adding items to the program the need for individual purchase orders was eliminated. The process has been automated and provides repeatable replenishment via the EVP process. Prior to implementing EVP, Company “XYZ” produced 634 purchase orders totaling $79,250 in hidden costs. One year after implementation of the EVP program, the total number of POs produced was 344 at a cost of $43,000. The total savings provided through reduction of purchase orders equaled $36,250. An additional benefit to Company “XYZ” was the buyer’s ability to spend more time on value added actions and pick up extra responsibilities which included managing and purchasing all bare boards.
Freight
More often than not we find that there are significant savings available with improved freight management. The following are a few points to consider when evaluating your freight management. With multiple suppliers of MRO materials companies cannot consolidate shipments; more incoming shipments equals higher freight charges and more hours spent receiving and stocking products. For every shipment that includes a hazardous product the receiver is billed an additional $27.50. Because Company “XYZ” increased the number of MRO items purchased through Murray Percival they were able to reduce the number of total shipments and hazardous materials shipment which considerably lowered their freight costs. For the 12 months prior to the EVP program Company “XYZ” had total freight costs of $19,530.00. Twelve months after the implementation of the EVP program Company “XYZ”s freight costs equaled $8,640.00, a total savings of $10,890.00.

Stock outs and Expirations
Managing “stock outs” and expired material is a continuous struggle. It is imperative that manufacturers have product available when needed for production. The consequences of these events are always costly. Company “XYZ” had approximately 60 “stock out” occurrences in the year prior to implementing the EVP program. Of those 60, 45 were what we classify as “Non Threat” and 15 were classified as “Line Down”.

“Non Threat” is an out of stock scenario which does not cause a line down situation but does cause a “fire drill.” This situation entails multiple people frantically working to find available material as fast as possible. Costs associated with a fire drill include time and expediting fees. Company “XYZ” assigned a conservative $200.00 cost to each “Non Threat” situation creating a total cost of $9,000.00.

“Line Down” situations carry all the same chaotic issues as “Non Threat”; however, events of this nature bring production to a halt which is far more expensive. Company “XYZ” determined that each “line down” event cost them $2,040.00, totaling $30,600.00. Circuit board assembly demands a large amount of time sensitive material which is typically not on the Bill of Materials (BOM) and not covered by ERP systems. This increases the risk of “line down stock outs”.

Company “XYZ” also determined that the cost of expired material equaled 3% of their total MRO expenditure. 3% of $500,000 is an additional $15,000.00 in cost annually.

The savings generated for Company “XYZ” during the first year of the EVP program were as follows:

<table>
<thead>
<tr>
<th>COMPANY “XYZ” – Savings from EVP Program</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Reduction of Purchase Orders</td>
<td>$36,250</td>
</tr>
<tr>
<td>Reduction in Shipments</td>
<td>$10,890</td>
</tr>
<tr>
<td>Zero “Stock Outs”</td>
<td>$19,800</td>
</tr>
<tr>
<td>Zero occurrences of Expired Material</td>
<td>$7,500</td>
</tr>
<tr>
<td>Total Savings</td>
<td>$74,440</td>
</tr>
</tbody>
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Fast Track Supply Chain Streamlining

In summary, the EVP program has proven to reduce purchase orders, expired material, on hand material, “stock outs,” “line down” events, and freight costs. The integral scan, track, and replenishment process streamlines procurement and minimizes non value added tasks.

In the words of their MRO buyer:

“The EVP program has been a welcome addition for us. The people at Murray Percival have been great to work with, and the program is going very well and we are now adding additional items. We didn’t realize how much time we were spending issuing PO after PO for supplies. It’s amazing to see the difference. Thanks.”

EVP from Murray Percival features:

- Track-and-trace automation
- Easy to use scanner
- Consolidated shipments
- Access to thousands of products
- MRO inventory management
- Monitor expired and slow moving material
- Reduce waste
- Reduce suppliers
- Time sensitive material reporting
- Consumption reporting
- Automated replenishment
- Proven Value added process improvement