



Supply Chain

## To Optimize MRO, Get Smart with Lean Supply Chain Management

Don Sears | Jan 29, 2018

Is your shop committed to continuous MRO supply improvement? Explore the ways lean manufacturing can benefit everyone—from shop floor team members to the supply chain managers—and the bottom line with insights from an industry leader's white paper.

Be honest: Does your shop tend to hoard parts and supplies to help manufacture the products your company builds? It makes sense. No machinist, operator or engineer wants to run out of must-have components, coolants and tools that are absolutely required to do the work.

Some might even be encouraged to stow away MRO supplies. No one wants to upset the production manager or feel the trickle down of frustration from top-level bosses when the shop suddenly finds itself with a machine or two out of commission because a reliable cutting tool suddenly wore out (and there are none available or can't be found—and the vendor only has them on back order). Sound familiar?

The profit and loss issue arises from the fact that MRO supplies have a cost to acquire and replenish, and they also have a cost to carry (and keep). Stashing supplies may seem necessary, but it is ultimately inefficient. Although you and your production manager may have an understanding about always having your supplies—and then some—at the ready, do not be surprised if purchasing and manufacturing management uncover these hidden inventories.

But it goes beyond stockpiling. You and your production manager may be accountable, but that does not necessarily mean everyone else is being responsible.

"Frequently, many of the supplies required for MRO tasks are actually in stock, but they just cannot be located. ... Many of the items required for maintenance or repairs are obtained with spot buys that ignore price in favor of availability," writes *Supply Chain Management Review* in the article "The Case for Managing MRO Inventory." Freight and unplanned downtime is a factor here, too, and "waiting for repair components that might already be somewhere in the facility."

According to the article, MRO inventory can account for up to 40 percent of procurement costs. The good news is that there are proven lean manufacturing methods to help manufacturers become smarter about MRO inventory management and cost containment while ensuring parts and supplies are always available in tool cribs—but in a more centralized way with a more well-managed process

with defined policies and clear working practices. But first, manufacturers have to step back and see all of the duplicated buying and inefficient stockpiling across the entire shop floor.

"Buying processes, vendors and inventory management practices for the same type of supplies often differ between departments and facilities," writes Material Handling & Logistics in the white paper **"*Leaning Out the MRO Supply Chain*,"** which details the best practices for lean MRO. "Such characteristics, from a lean management perspective, can add up to huge opportunities to reduce waste, reduce costs and improve productivity."

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Material Handling & Logistics, "*Leaning Out the MRO Supply Chain*"

## What Is a Lean Supply Chain in MRO?

Becoming lean in manufacturing starts with people. Lean manufacturing is a practice that requires buy-in and participation. Yes, there are tools and systems to be used, but becoming a lean organization begins with employees—machinists, operators, engineers and production managers—adopting the philosophy of continuous improvement.

"In addition to leveraging a variety of tools to eliminate waste, lean proponents place a strong emphasis on the ability of people at all levels of an organization to identify and solve problems," says Material Handling & Logistics. It requires employees be accountable and "assume responsibility for recognizing and responding to issues—defective product for example—as they arise."

Perpetual improvement is the central tenet of the Japanese business philosophy known as "kaizen" and a key element of the lean-manufacturing movement. Kaizen was famously employed by the automaker Toyota in its Toyota Production System, which targets "inventory and other types of waste, and pushes organizations to continuously enhance customer value," writes Material Handling & Logistics.

So if you move toward becoming lean, where can you find places for improvement? Look for waste in process and production in the value stream.

"A value stream encompasses all of the actions—value-creating and non-value-creating—required to bring a product from concept to launch, and from order to delivery," explains Material Handling & Logistics.

**Learn how to take control of your MRO operations with *inventory management solutions* including *vendor-managed inventory*, *customer-managed inventory* and *vending systems*.**

## To Become a Lean MRO Shop, Adopt and Leverage Best Practices

So, where should you start? After everyone in the organization buys in to a lean MRO approach, there are concrete efforts that a business can begin using right away. Material Handling & Logistics suggests adopting the "5S" method, which includes: sorting, setting in order, shining, standardizing and sustaining.

There is work involved, but the benefits outweigh the uncomfortable change that can rattle a production floor. It can be as simple as moving toward a super-organized tool crib that maximizes space situated right near where machinists and operators are and where the work is being performed.

Other efforts include using “value stream mapping,” advises the Material Handling & Logistics white paper, which in the case of MRO includes “mapping MRO ordering and replenishment processes” so that you can “shine a light on wasteful activity” and identify where you can improve.

Becoming lean also means standardizing. Just as engineers follow standard practices, such as sequencing work for efficiency, so too should your MRO operation. The same goes for having MRO visibility, which means having inventory visibility and replenishment systems in place.

Another way to become lean is to be smart about product flow. Often called a “pull system” in lean circles, supply replenishment can be designed to automatically signal inventory systems when an item is “pulled” for use on the floor. Whether by scanner or locked key entry cribs, having pull systems in place that do not require purchase orders and are digitally signaled can reduce processing waste, increase arrival times and consolidate invoicing.

New to the ideas of lean manufacturing? Pick up smarts in this white paper, “***Leaning Out the MRO Supply Chain,***” and learn how to become better organized and focused on improving MRO management.

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