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by George Krauter

# Solving the Mystery of Integrated Supply for MRO

It is becoming increasingly evident that the lack of world-class support from the maintenance, repair and operations (MRO) stores is having a significant and detrimental effect on maintenance reliability programs. Fill rates (i.e., availability of needed parts from stores) average less than 75 percent. This means the availability factor of parts needed is not reliable. A reliable plant requires all functions in maintenance's lean reliability programs to be reliable. Since availability of parts needed is a component of the reliability program, an unreliable MRO storeroom becomes detrimental to reliability goals.

Critical spares must be available in the quantity required 100 percent of the time, otherwise mean time to repair (MTTR) is extended, causing uncontrolled downtime and a drain on profitable operations. The insecurity that maintenance managers have regarding MRO stores causes them to create a buildup of sub-stocks (e.g., spares stored in desks, closets, etc.) to be used as a buffer against out of stock situations. This causes unnecessary consumption of budget dollars and duplication of uncontrolled inventory because of the inefficient and uncoordinated MRO stores procedure.

While plant personnel are continually confronted with MRO challenges that detract from reliable goal achievement, suppliers are generally not

## What Is It? What Is It NOT?

forthcoming with methods to improve the supply chain and reduce their clients' total cost of ownership [TCO]. They have quotas to meet and want to sell as much as they can. It's the mentality, "We have the best price and best delivery, give me the order...it's my turn." Get the order and move on is the sales mantra, never mind proposing changes in the supply chain that benefits clients

and American industry overall. The result is a stagnant MRO situation that remains unchanged.

So, what is the solution? Is there a process in the MRO supply chain that satisfies the needs required to achieve a reliable plant? What changes should occur to solve the problem and still maintain cost control at optimum? In the quest for solutions, MRO has become one of the focal points for opportunity. Internally, these questions arise: What statement of work will work for us and effect the needed change?...How do we change?...How do we implement?... Who would be in charge?...Will everybody agree to the change?...Can we do it ourselves?...Why haven't we?...Is there a provider who has the solution we need with the commitment to sustain the benefits?

Solutions to the MRO problem emerged in the early seventies when an industrial distributor established a storeroom on-site within a manufacturer's

facility. The effect eliminated duplicated steps in the MRO supply chain and provided the needed MRO support for a reliable plant. Over the years, this process became known as integrated supply. Various industrial distributors attempted to become providers of integrated supply, forced to do so as a defensive measure. There is no clear definition of the term, so as a result, integrated supply means many things, many times negative, based on who is talking.

Choosing a process labeled as integrated supply is dangerous because of the diverse definitions that exist. (There is one distributor with nine different definitions). If an inadequate MRO change process is selected and installed under the name integrated supply and it fails to meet the reliability goals set forth, the company will not try that "BAD" thing called integrated supply again.

The goal of this article is to define optimum integrated supply as it should be in relationship to plant reliability and provide an outline of the advantages and disadvantages that exist within the process.

### Integrated supply should:

- Provide a 25 percent plus inventory reduction.
- Increase fills rates to 98 percent with 100 percent availability of identified critical spares.
- Eliminate uncontrolled sub-stocks.
- Maintain 99 percent plus inventory accuracy.
- Reduce transactions to just two invoices per month.
- Control price and share savings with the provider.
- Establish mutual sharing of all costs.
- Maintain a company required audit trail.
- Reduce freight costs.
- Provide optimum computerized maintenance management system (CMMS) capabilities.
- Arrange product seminars to connect maintenance personnel with manufacturers' engineers.
- Offer reengineering services.
- Coordinate MRO operations and communications with plant reliability efforts.

Pure integrated supply is accomplished by utilizing a committed provider operating the MRO supply process on-site while eliminating the waste in the existing supply chain.

Here is an example of the effects of PURE integration properly applied by a food company:

Senior management required purchasing and operations to remove \$20 million from next year's spend. The reduction goal assigned to MRO was a \$2 million total cost of ownership cost recovery amount. The MRO portion of the overall cost reduction goal equaled 10 percent, even though MRO was only five percent of the company's spend.

### This is what happened:

- Upgraded CMMS including management of MTTR, failure mode and effects analysis (FMEA), reliability maintenance, master equipment list (MEL) and bill of material (BOM): Not Valued
- Price reduction... Guaranteed 5%; Shared Savings 3%..... Savings: \$358,000
- Inventory recovery.....30%.....Savings: \$410,000
- Fill rates.....98.6%, up from 76%.....Not Valued
- Inventory accuracy.....99.7%.....Not Valued
- Transaction elimination.....75,000.....Savings: \$225,000
- Freight savings.....3%.....Savings: \$18,000
- Downtime.....Zero.....Not Valued
- Productivity programs.....Savings: \$853,000
- Personnel reassignment.....Savings: \$180,000
- Warranty recovery.....Savings: \$276,000

This food processing company experienced a total measured savings in excess of \$2.3 million. While the financial goal was achieved, the non-valued functions and processes help establish improved service benefits.

### What pure integrated supply is not:

- Vending machines;
- Vendor managed inventory (VMI);
- Blanket orders;
- Long-term agreements (LTAs);
- Electronic data interchange (EDI);
- E-catalog;
- Pricing consortiums;
- Systems contracting;
- Etc., Etc.

These services should not be labeled integrated supply because they fall far short of the disciplined processes required to change the MRO situation to optimum support for plant reliability.

Here is an example of the dangers of a failed program that was labeled integrated supply:

A health care company experienced excessive downtime caused by a lack of MRO parts. MRO inventory had a negative stock turn rate, uncontrolled sub-stocks exceeding \$200,000 and growing, and long-term price agreements that were ineffective. Change was essential to stop the drain on reliability.

The company asked its major suppliers to share solutions. Upon review, the company selected Distributor A's plan called integrated supply. The result was a disaster because Distributor A is a DISTRIBUTOR with little knowledge as to what is necessary to implement, operate and sustain a pure on-site integrated supply program. The distributor operated under the belief that, "It's like a hardware store; how tough can it be?"

### Here's what happened:

- Inventory was not reduced because Distributor A still had off-site inventory costs.
- Prices were not reduced long-term because of added operational costs.
- Programs installed were shortsighted and did not solve the problems the company had that instituted the need for change in the first place.
- The traditional distributor's salesperson could not be reassigned, which added unnecessary costs.
- Distributor A was unaware of the commitment necessary to implement and sustain.

The company terminated the agreement with Distributor A and attempted to solve the MRO situation internally. Some improvements occurred, but fell far short of the potential available.

All this failure in the name of integrated supply.

To say the least, this situation was costly in itself, however, the major cost was the lost opportunity. The integrated supply approach failed and will never be tried again by this company. If pure integrated supply had been initiated by a "pure" integrator, then benefits would still be in place and the company would be free to concentrate on its core competency.

MRO change is critical for reliability. Pure integrated supply provides the optimum solution when properly applied and sustained. But the BIG question is: Can the change be established and sustained in-house or does success require that a third-party expert be employed to ensure success?



**George Krauter** currently serves as Vice President for Storeroom Solutions Inc., in Radnor, Pennsylvania. Mr. Krauter is a recognized authority on the role of the MRO storeroom in supply chain management and reliable maintenance and is a frequent speaker at industry conferences. [www.storeroomsolutions.com](http://www.storeroomsolutions.com)



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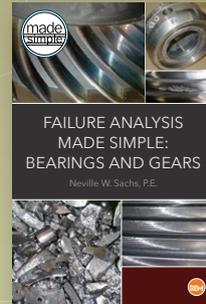
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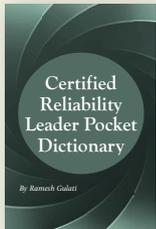
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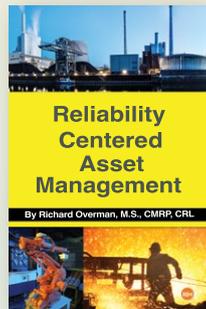
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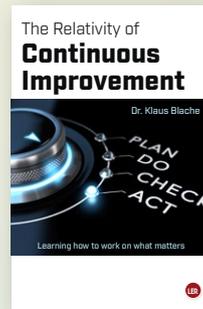
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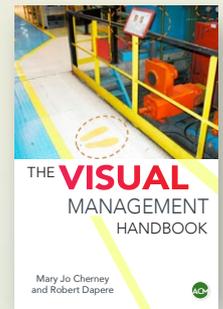
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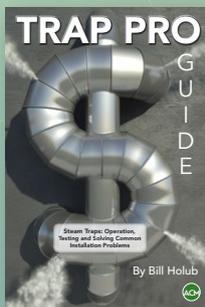


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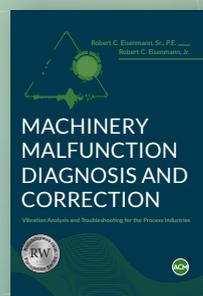


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