

INVENTORY PROCESS OPTIMIZATION®

AN INNOVATIVE APPROACH FOR TRUE INVENTORY OPTIMIZATION

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The optimization of MRO and engineering spares inventory has, for many years, been a goal of inventory managers, operations managers and financial managers. This is particularly so in industries with significant investments in these types of inventory. Often driven by a need to free up working capital, the benefits that come from achieving inventory optimization are such that the business case for action is irrefutable.

The problem is that, until now, the techniques that have been applied to achieve optimization do not result in a truly optimal outcome. When subject to critical analysis the reasons for this become quite obvious. Let me explain.

Traditionally, one of two approaches has been applied: either under go data analysis using a statistically based software algorithm, or select a single criterion (such as obsolescence) and look for inventory that meets that criterion. Both of these approaches overlook one simple fact.

High levels of MRO and engineering spares inventory are a symptom of the broader issues with the way the inventory is controlled, supplied, accessed, purchased and managed. These issues involve a wide range of personnel who come from engineering, maintenance, stores, inventory management, procurement and even finance. Achieving true

inventory optimization and lasting results requires an understanding of the behaviours, context and process factors that influence the inventory. Addressing high levels of MRO and engineering spares inventory through traditional inventory review and 'optimization' techniques does not address these issues, it rarely involves the range of personnel that influence the outcomes and does not improve the company knowledge to address these issues in the future.

Neither software algorithms nor single criterion solutions address the full range of possibilities and so they cannot possibly provide true optimization. At best they provide short lived gains that are most likely reversed when the operational processes and behaviours are once again allowed to influence inventory levels.

Achieving true inventory optimization requires a new, innovative approach that combines knowledge of parts usage, procurement and supply chain issues with a review of behaviours and the management processes that drive them. We call this Inventory Process Optimization®.

INVENTORY PROCESS OPTIMIZATION®

At Initiate Action we help companies achieve Inventory Process Optimization® using a two stream process that is specifically designed for MRO and engineering spares inventory and involves training a wide team of influencers.

Stream 1 is an Individual Parts Review using our Inventory Cash Release® Process and it comprises three key elements.

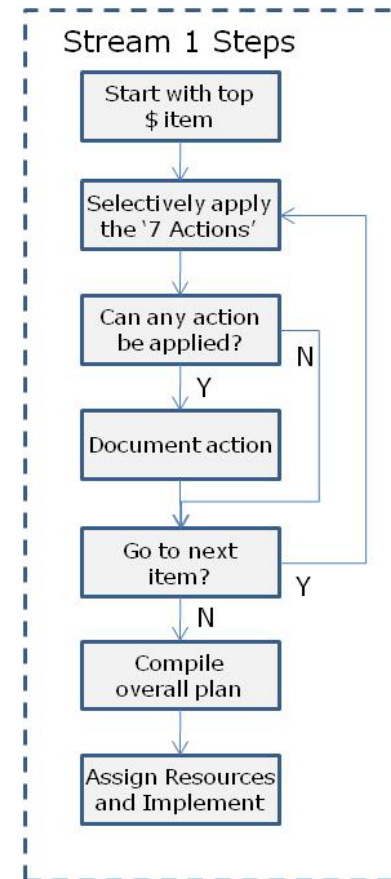
1. **Focus on the high dollar value items:** In every single review of MRO and engineering spares inventory that we have seen the inventory value adheres to the 80:20 rule. That is that 80% of the value is tied up in 20% of the inventory items. This means that

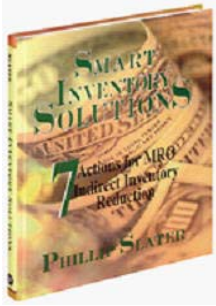
reductions in working capital can be achieved by reviewing a small percentage of the items in stock. This saves a lot of time, energy and money. Software solutions will usually include the entire inventory and so at least 80% of the effort is wasted on items that will have little or no impact on your problem.

2. **Utilize '7 Actions' for Inventory Reduction:** Our approach turns inventory review on its head by matching the required action with the inventory attributes. Rather than using a single criterion (such as obsolescence) and looking for inventory that matches the criterion the Inventory Cash Release® Process starts by looking at individual inventory items and matching the solution to the attributes of the item. This is possible because from Step 1 we are only reviewing a small proportion of the inventory but it is the items that have the greatest impact. In addition this approach ensures that the solutions are specific to the item attributes. This is because the '7 Actions' were developed by working from first principles to identifying the steps for inventory reduction that can be taken in the areas of supply chain, procurement and inventory management and so we know that all possible solutions are considered. The logic of this process is shown in Figure 1.

3. **Involve a wide team and build their skills:** The key to the ongoing application of the Inventory Cash Release® Process is the training of your team and working with them in the application of the process. This has two effects. Firstly, it engages them in the solution so that they gain ownership of the outcomes and are better placed to champion the changes that may be necessary. Secondly, it builds their skills and knowledge in this area so that they can continue addressing inventory issues on an ongoing basis.

Figure 1: *Individual Parts Review*





In addition, unlike the algorithms hidden within software, our approach is fully transparent and is documented in the book *Smart Inventory Solutions*, written by our Principal Phillip Slater and published by Industrial Press, New York, NY.

It is because the logic of software algorithms is not visible that most users don't trust the outcomes and ultimately override the recommendations. With our approach this does not happen.

Stream 2 is a Management Process Review. This review involves your team but is led by one of our consultants. The steps are:

1. Appraisal of your current inventory management practices.
2. Identification and agreement with the team on the issues and behaviours that have a negative impact on inventory levels.
3. Identification and agreement with the team on the actions required for achieving lasting results.

The output of the Management Process Review is an agreed action plan and timetable to address issues and behaviours.

The application of the two streams is shown in Figure 2.

Figure 2: Application of the Two Streams



OUR SOFTWARE IS AN IMPLEMENTATION TOOL

No matter what approach is used for inventory review one of the hurdles that companies face is actually following up on the implementation actions that they identify. Often, the actions are listed on a spreadsheet on somebody's laptop. Sometimes that person moves on and the information goes with them. Sometimes they lose track of who was do what by when. Sometimes they lose the information and logic that led them to make their decisions in the first place.

To address this we have developed a tool that not only helps manage the range of implementation actions but also provides an audit trail of decisions and responsibilities.

The ICR[®] Implementation Software guides you through the Inventory Cash Release[®] Process, enabling you to track all actions and maintain that all important audit trail of decision making.

Tracking your actions gives you the power to see what has been done and what still needs to be done. This is valuable information for ensuring the success of your implementation. Our software will even send email reminders to those required to take action.

In addition, by creating an audit trail of the decisions you enable a simple way to review the outcomes and what led to them plus in this world of ever increasing governance provide a clear trail to demonstrate an effective review of working capital. Figure 3 shows a screen shot from the software.

Figure 3: Screen Shot of Software

Proprietary software is used to provide an audit trail of decision making and implementation

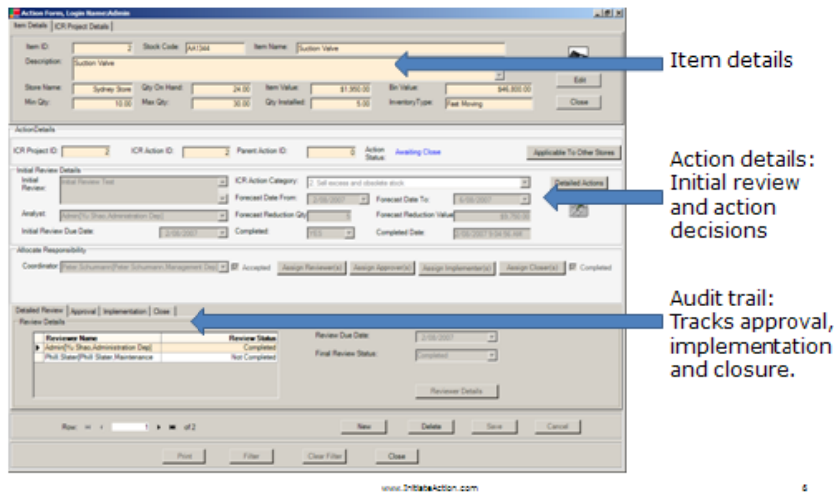
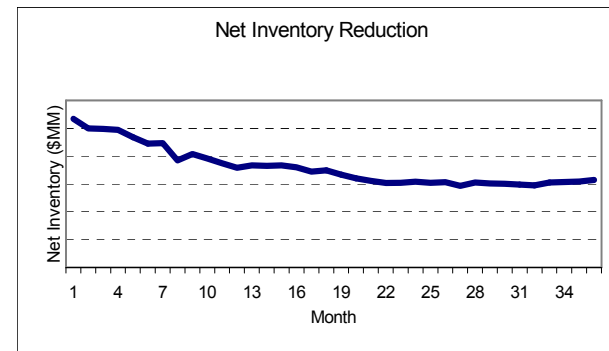


Figure 4: A 42% Inventory Reduction



The approach has been adopted by companies in many different industries and is ideal for: MRO inventory, engineering spares, process industries, transport, utilities and power generation, airlines, steel industry, after market spares, customer service spares, automotive OEM's and suppliers, manufacturing, oil refineries, mining, and aluminium smelters.

Some of our clients have provided permission to use their comments:

THE RESULTS ARE HARD TO ARGUE

Discussing inventory review and the merits of one technique over another is one thing, actually producing results is another. Figure 4 shows a 42% reduction that was achieved by a client using this approach and that was sustained over a period of three years.

Other recent results include:

- A 47% reduction (identified in a pilot program with full implementation pending)
- A 36% reduction achieved in 14 months
- A 24% reduction achieved in 12 months

These results have provided our clients with many tens of millions of dollars in benefits.

Focused recommendations for specific actions to have immediate effect on inventory value.

Art Posey
Waste Management (USA)

A new way for analyzing inventory...a simple and sound methodology that makes it easy to build a business case for management buy in.

Jacinta Mackintosh
Trico Products

Provides a clear process for identifying opportunities and reducing inventory.

Peter Deed
OneSteel

CONCLUSION

For many organizations the promise of traditional optimization is hard to ignore. The idea of reducing inventory based on 'hard data' of past activity can be very attractive, especially to the analytical mind. But this approach is flawed in its thinking and limited in its application. Anyone that adopts this approach needs to be aware that traditional optimization doesn't truly optimize. It will, at best, produce limited results through data recalculation but these results will be neither complete nor sustainable.

These shortcomings are addressed however through Inventory Process Optimization® and the application of the Inventory Cash Release® Process. This process is based on first principles and builds the experience of your team to ensure that the solution is both complete and sustainable. By taking this approach you can identify all of the actions for inventory reduction in your situation and the requirements for operational changes that will drive a lasting result, and release the cash back into your business.

MORE INFORMATION

For more information on how you can achieve Inventory Process Optimization® visit the website at www.InitiateAction.com or contact us directly at:

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