You know you're in MRO trouble when...

An eye-opening guide to pinpointing and resolving common and wasteful MRO missteps.

Presented by

SDI

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MRO is Viewed as a Spend Category

(MRO is a Business Enabler, Not just a Spend Category)

by Kurt Meiers
Vice President, Procurement

Take strategic sourcing and mix it with operations in addition to organizational management and throw in over 15 years of experience leading IBM's procurement teams and you'll find Kurt Meiers, one of the most savvy sourcing vice presidents this side of the MRO supply chain.

Kurt's industry experience and client-centric approach makes him a sourcing expert for both SDI's internal and external clients. His expertise in all sourcing and category management activities means our clients have full confidence in SDI's ability to drive value throughout their enterprise.

"Shared vision, executive involvement, common metrics and consistent execution are required to move MRO from a functional cost of doing business to a value-creating enabler of better business."

You know you're in MRO trouble when... you have no way to drive compliance to your negotiated deals

Historically, MRO has been a diverse spend across many vendors and many smaller-dollar pieces and parts – and global procurement organizations tend to focus on the larger and more consolidated spend areas. ***Procurement's perspective is that the bigger spend areas provide opportunities for greater savings***. These areas are measured on not just quality of the product, but their cost savings. Procurement, as a group, feels if they aren't driving cost savings then they aren't viewed as a value-add.

So when we talk about negotiated deals and driving compliance, there hasn't been a level of focus on negotiating good deals or pushing end-users to follow through on using suppliers with established deals. MRO is so diverse and the spend is so small that the savings impact on the P&L is not great...which doesn't do much to raise the perceived value for Procurement.

The tendency is to make decisions based upon emotion and not fact.

When a Maintenance manager incurs unplanned downtime, their entire focus is to get the line up and running right away. With very few negotiated deals in MRO, the Maintenance team learns the behavior of stockpiling parts required to get the line productive again. ***Costs begin to rise because*** the Maintenance person orders 10, they use a couple, they misplace others – and instead of spending time searching for parts, they simply order more. On a large scale, this impacts the company because noncompliance becomes part of the culture – and, over time, this will weigh heavily on profitability. On a small scale, it impacts the Operations manager because their budget takes a hit in terms of lack of processes, role confusion, elevated shipping costs, and over- ordering / excess inventory.

The road to better MRO practices must start with better data for better decisions. When the data is bad or incomplete, the tendency is to make decisions based upon emotion and not fact. MRO leaders must commit to a data cleansing and management process as part of any improvement initiative. Better data is the foundation of better insight, transparency and decisions. This will help Procurement add greater value and better serve the organization.

You know you're in MRO trouble when... your data resembles alphabet soup – with a few vowels missing

If an MRO function doesn't have good data, then you can't correctly source the right item from the right supplier at the right time. ***When we talk about master data, we focus on cleansing, enriching and normalizing the data***. In our multi-site clients, working and managing multiple spend categories across multi locations, we find that they have the exact same products held in multiple storeroom locations with differing names / numbers. It truly is an environment of alphabet soup, where job standardizing across facilities becomes almost impossible because everyone has their own approach to nomenclature. It makes it difficult for Procurement to define what they're saving or what value they create for the organization when they're spending so much time on manual interventions to make the data workable.

This impacts Operations the most. Sure, it slows down the processes in Procurement when the part-naming structure is flawed, but the productivity impact on Operations is substantial because they spend time responding to questions from the buying team to get the right item at the right time. And if they don't have this conversation, then they risk downtime when parts are not available.

Search time should be in the 1% range. Normal, in most of our client environments is more like 15-20% where maintenance or manufacturing people are searching for the right product.

Better MRO best practices include ***a unified, consistent data management process that touches parts that come into the company regardless of the source system.*** All information must be normalized, cleansed, and standardized to some set of governance principles and disseminated back through the business. Invest in a robust data management program to control the consistently of data and how it's used.

Invest in a robust data management program to control the consistency of data and how it's used.

You know you're in MRO trouble when... no matter what you do, your inventory continues to grow

There are a couple of primary reasons for this. The first reason can be attributed to Maintenance personnel being driven by emotions (not data) when setting static min-max inventory levels. For example, Maintenance demands that a new part must be on the shelf for productivity purposes. They want 10 on the shelf at all times – so they set minimum of 10 units and maximum of 20. Procurement buys 20 and the parts sit until they are consumed in annual increments of two. Of course inventory isn't optimized in this scenario. ***Something happens to cause a temporary spike in consumption and the organization incurs a stock-out***. The emotional reaction is to automatically raise the max which elevates the investment in inventory. This is an emotion-based decision vs a data-driven decision.

Another component that contributes to the rise in inventory is non-stock items or "ORO" items (on request only items). For example, a job needs a specific part and it is purchased. It's at this time Maintenance wants to add the part to the catalog – ***they want to have it on the shelf just in case they ever need it again***. As actual consumption patterns are analyzed, they find the part never gets used again or at least not for another five years. Now the MRO team is pulling non-critical spares into stock. Stock items should include critical spares, items with very long lead times, and items that turn quickly. Now you get a bad mix in the storeroom and what goes into stock is an inflated insurance policy to cover the Maintenance team.

This ties up working capital when you have many items in the storeroom that aren't moving. ***In many cases, we see inventory turns below one*** – where inventory is turning less than once per year. You have a lot of slow-moving inventory. Additionally, more unproductive inventory leads to increased carrying cost and warehousing space. This limits where the organization can invest to improve innovation or increase productivity of the business.

Conduct a SLOB analysis to move closer to better MRO practices. SLOB analysis highlights slow-moving and obsolete inventory in current stocking levels. The goal is to remove the slow-moving items out of stock and add the continuous and repeat-purchase items into stock.

You know you're in MRO trouble when...
Tinder delivers more perfect matches than your 3-way matching process

All match exceptions are downstream symptoms of upstream problems – whether the supply base isn't fully connected to what you do or buyers aren't fully quoting and approving prices. This happens for three primary reasons: First, MRO employs a wide supply where a company buys from a large variety of suppliers on a regular, but not continuous basis. Second, because you have a wide supply base, many of your invoices come in paper. If you buy something once every two years, it's almost impossible to convert a supplier to EDI or to a vendor portal. It is a ***huge challenge to deal with all of the paper invoices from multiple and rarely used vendors***. This delays the matching process and often burdens your AP team with unnecessary paperwork.

And finally, buying from a vendor once every two or three years leads to pricing inaccuracies. Two-year-old prices generally lead to match exceptions – when the PO has a different price than the invoice. To avoid this, the MRO team should quote the product prior to purchase, so the Procurement team doesn't waste valuable time quoting and updating purchases.

Many companies either outsource and pay per invoice processed or they set up individual shared service centers in India, Eastern Europe or Mexico. ***The amount of processing paper jams up the shared service center***. They either have to transfer paper to an electronic format or transport a great deal of paper to different locations around the world. This is a lot of non-value work for something that isn't core to the business.

Matching in a paper environment wastes time and causes rework. ***Something that should cycle through the system in a day or two can get held up for more than 20 days***. At SDI, we process invoices on an average of 3 days – from the time the invoice hits our door, to the time it is scanned and processed, approved and ready to pay. This greatly exceeds industry benchmarks in shared service processing – and what experts consider world-class.

How to get started on the pathway to best practices.
Outsourcing is a way to manage the process. Processing invoices from MRO suppliers is not a value-add for a company and it's not core to the value stream. So don't focus on it.

You know you're in MRO trouble when... mission-critical spares are managed with the same urgency as Janitorial

We have entered into client engagements where no one was segmenting out critical spares from all other parts. Critical suppliers were undifferentiated from Janitorial suppliers. When companies don't manage critical spares and suppliers from all others, they incur unnecessary operating risk, production costs and damage to their brand.

At SDI, we take a different approach. We get everyone focused on what is critical, why it's critical and the impact of managing critical differently than all other MRO products. So much so, we cycle count critical spares monthly to make sure spares are available and accurate. When an organization is working in the reactive mode, availability and accuracy suffers. They often think they have 3 critical spares on the shelf, when they don't have any. The entire organization suffers from a lack of inventory reliability and data integrity.

Typically it is very difficult to run a quality store when you're managing in a reactive environment because no one is spending the time or committing to best-practice processes. ***It really is a catch 22 – and it's very complex***. And when you're in it you can't get yourself out of it. Many people think that more spares is better as an insurance policy, but until you work on the processes of criticality and lead times to move you from the reactive mode, cost savings will be elusive.

More parts aren't better if they aren't the right parts, and why would you carry 10 if you can manage effectively with two?

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You know you're in MRO trouble when... your IT project list always ends with the letters M-R-O

Let's face the reality – MRO isn't viewed as important when compared to direct spend so it always gets pushed down on the list of IT priorities. During one particular integration, a leader on the project said that we must go to IT with a full scope of the MRO needs because we only get one chance per year to make it onto their priority list. IT isn't making this decision on its own, they are following the lead of the business. The business states that MRO is a cost of business. MRO doesn't generate revenue for the organization so the more money spent...is just more money spent.

There are costs and risks that many times are not captured in the cost of MRO. The MRO team is required to perform more manual workarounds and more manual steps in the end-to-end process. When MRO is viewed as 'just parts', the true costs and risks associated with the MRO process are not accurately captured. The irony is that much of the additional cost and risk that exist are a direct result of manual workarounds due to systems limitations. Whenever you introduce additional human intervention, then the MRO team isn't functioning as effectively as possible and this could lead to mistakes and equipment downtime. The view of MRO as unimportant can impact the culture over time to a point where it becomes an accepted practice to push MRO initiatives lower on everyone's project list.

Better MRO practices can begin tomorrow by examining the true cost of the MRO process. Define how the organization is impacted, where operations is failing, and what extra cost is being incurred in terms of duplicated work, unnecessary process and unplanned downtime. The business case must extend beyond MRO to the business.

Better MRO practices can begin tomorrow by building better business cases.

You know you're in MRO trouble when...
Procurement negotiates a new supply chain based on price savings alone

Business transformation is capturing every business headline. You know this because you're living it every day. The rate of business change is accelerating in an effort to become more cost competitive in domestic and global markets. We are all being driven to be more cost efficient and effective, but price is only relevant if the right product is readily available with high quality and within defined specification / tolerances. Supply chains are being transformed into strategic and value-added business platforms. Procurement should not negotiate away value for price savings alone.

If Procurement delivers upon its functional objective of driving savings and the business objective of supply chain support, then cost savings can be reinvested to drive innovation or drop to the bottom line. If price is the only consideration, then maintenance and operations deal with inferior quality, the wrong part or unavailability of products. This pulls focus away from proactive planning and maintenance work to a reactive mode of searching, ordering or hoarding parts. The perception of Procurement changes from a business partner to a function that only understands piece-price...and their role becomes minimized.

Procurement must change the context of its sourcing decisions from piece-price to the objectives, goals and value of business. Only when the decision process is constructed around business objectives will Procurement have the opportunity to create value for the company across the supply chain.

Procurement should develop a balanced scorecard approach for supplier selection and communicate the balanced metrics across the organization. Procurement has an opportunity to lead and define the relationship between quality, availability and price in supplier selection and management.

Supply chains are being transformed into strategic and value-added business platforms.

MRO is Viewed as a Function

(Moving from Is-a-Function to As-a-Service)

by Missy Decker

Vice President, Solution Design

Missy started her career at SDI 35 years ago, working side by side with the founders of MRO integrated supply chain management.

Throughout her career, she has worked with many of SDI's clients, across the supply chain spectrum and across many industry verticals, giving her a uniquely holistic understanding of the needs of any organization – from individual departments or isolated sites to the enterprise as a whole.

Missy leads the solution design process beyond traditional expectations, driving continuous improvement. Missy's experience means she knows the right questions to ask, so SDI can build the right solution. The first time. Every time.

"Managing MRO in an As-a-Service environment truly encapsulates the opportunities and enables all facets impacting the supply chain to be rationalized and optimized."

You know you're in MRO trouble when... you've been working so long in a silo, you're starting to feel like grain

MRO is a collection of independent operating departments with their own piece of the puzzle along the end-to-end MRO supply chain. Because the lack of connectivity across departments is so apparent, and because no one owns the entire MRO process, many end up working in their own silo and working on issues that help their ***own*** department run efficiently.

Departments often have metrics, but what we find is that department-based metrics aren't tied to the overall effectiveness of the supply chain. Lacking cross-department insight, metrics, communication and actions that benefit one department often sub-optimize the end-to-end MRO supply chain. For example, Procurement might have a metric that tracks spend under contract, but if those contracted vendors only cover 20% of the stocked items in the storeroom, then this is a flawed measure for the entire system.

Sourcing and Procurement communicate well most times, but does Procurement ever ask Maintenance about the quality of suppliers and reliability of parts? Only in rare instances. Maintenance might tell Accounting not to pay an invoice for a late or inferior product, but this hardly ever gets back to Procurement. Just connecting all MRO players around one table to discuss and hear the impact of individual efforts can be enlightening.

MRO is not just products – it is ***process***. Moving towards better MRO practices must include consistent communication, common measures, meaningful connectivity, and integrated processes across all MRO functions. Each department needs to understand the end-to-end MRO process and their role in making it efficient and effective. Beyond communication, to solve the systemic problems in MRO requires a single owner of the process.

If contracted vendors only cover 20% of the stocked items, this is a flawed measure for the entire system.

You know you're in MRO trouble when...

You know you're in MRO trouble when... a safety incident or line shutdown is the only time MRO is important to the C-Suite

MRO is a process that cuts across many departments, but there is little integration or visibility of MRO at the executive level. MRO only shows up on the C-suite agenda when production is lost. The team then explains its reaction to downtime – a critical maintenance part was not in stock, the team had to order and lead time was 5 weeks so the team had to rush the order, and the line sat idle for a solid week. This ***reactive*** mode is an epidemic in MRO processes and it is only when the bottom line is impacted that it receives any attention from the C-suite.

In our work, we find different domains from those "just getting by" to those applying world-class processes. These domains range across the continuum of reactive, planned, precision and world-class. ***Moving along these domains requires C-suite involvement***. Typically what happens in the reactive mode – the parts are kept close because proximity and wide availability saves the day, but what isn't understood is that prevention of the problem could have been achieved with better data and planning.

In the reactive mode, the greatest impact is on Maintenance and Operations. When lines go down and production is lost, then Maintenance is scrambling and making sub-optimal decisions. The sole focus is on getting the part from any source...and this has cost associated with it. Additionally, it can be very unsafe when a company is operating in the reactive / rush mode. It has been shown that ***65% of accidents occur when you are in the rush mode***. Lost production, higher part costs, potential safety incidents, role confusion (planners aren't planning, they're securing parts), and maintenance worker burnout are all results from operating in the reactive / rush mode.

Defining critical equipment and having critical spares assessed is the most important thing you can do today to progress towards best practices. It's critical to evaluate in terms of environmental, safety, production and maintenance cost. Rank parts from most to least critical. This ranking can come from walking the plant and asking 10 operating people from each area. Within a day the most critical equipment / parts can be identified.

The key is reliability center maintenance – first identify the most critical equipment and then the most critical parts for that equipment. Typically we classify the critical equipment then make sure the Bill of Materials is in place so if a part is needed, we have the part number and can order quickly. Next is assessing lead times on these critical parts to determine if we can order for a line outage or we have to stock. Look at lead time, parts accessibility, supplier reliability – and then come up with a game plan for the Bill of Material.

The Reactive Organization

(Moving from Reactive to Nimble, Effective and Intelligent Operations)

by Donna Ellis

Engineering Services Leader

An accomplished engineering talent in her own right, with credentials ranging from 5S, RCM and FMEA to DMAIC, Donna manages and coaches Reliability Engineers throughout the U.S. and Mexico. She helps identify, implement and document cost savings – while sustaining favorable customer relations. She excels at re-assessing and improving current processes for continuous improvements, and acting as technical liaison for plant operations, maintenance and vendors.

Her decades in supply chain, risk analysis, Six Sigma and lean manufacturing have earned Donna a place among the re-engineering greats. Her success at managing and developing engineering talent – and suppliers – is second to none.

"Business models are shifting, customer expectations are rising, and new competitors are emerging. Don't let costly and cumbersome MRO processes stand in the way of simplified, nimble and intelligent supply chain operations."

You know you're in MRO trouble when... solving problems is like a game of whack-a-mole where solving one just creates another elsewhere in the organization

MRO is historically an underfunded and typically mismanaged business process. Most organizations don't commit the time or resources to solve the root cause of the MRO problem – they only chase the symptom that is causing pain at the moment. When you chase and fix symptoms then the problem pops back up. The "pop back" can be in another function or within the same function. In MRO, the team applies a Band-Aid fix and moves on, knowing the problem isn't solved but it gets the organization temporarily going and productive again.

Maintenance people are resourceful. To return to productivity, they will put a part in until the right part is ordered and delivered. ***This causes rework and it happens within every reactive MRO supply chain process***. If they don't have the time to submit a proper purchase order because of the rushed environment, then they order the part on the P-card. All is good until the next time the part is needed again. Without proper procurement processes they go through the P-card again to fill the need...without solving the issue.

This is very frustrating to employees. It wears people down over time and negatively impacts the culture of the organization. Because they are constantly in the workaround mode – trying to figure out what they have to do right now to get the line up and running. These resources aren't doing what they are paid to do. This is costly in terms of time, effort and more importantly, employee motivation.

The journey to a better practice begins with data. Data is always the right place to start – clean, accurate, reliable, consistent data across all locations and functions. Data must reflect the right part number, accurate unit of measure, and correct supplier information for seamless sourcing and reliable maintenance work.

The team applies a Band-Aid fix and moves on, knowing the problem isn't solved.

You know you're in MRO trouble when... your team is ingenious at creating manual workarounds to accommodate systems limitations

MRO is not a difficult process, but it is complex. There are thousands of SKUs, hundreds of suppliers, and multiple units of measure. There are many nuances of MRO that the typical ERP system isn't equipped to handle. ***The most popular and widely used ERP systems are not made for MRO***. Every time you add a new line, you have to add hundreds of MRO parts into the system. In SAP it can take 5 or 6 screens of input to add a new part.

This is extremely time consuming and painful for the user, so many just don't add the part into the system. The technology is not made for MRO, but those interacting with the system are forced to use it. So they begin defining workaround processes to get the system to work for them and for the company. These workaround processes are almost never documented.

These workaround processes are almost never documented.

A lot of tribal knowledge is accumulated by one or two people. If those people ever decide to retire or move to a different position in the company, then this puts the process and the company at risk. Those workarounds are ingenious for the person, but risky for the company ***and they are never known by management***. This impacts the people doing the workarounds and it impacts anyone new coming into the organization because nothing is ever documented.

If you manage past the systems limitations, one way to move to a better practice is to document the workaround processes so people can be trained and process improvements can be explored. Once complete, the MRO team should present the documentation to IT to let them know what is happening and the cost associated with the workarounds.

You know you're in MRO trouble when...

You know you're in MRO trouble when...
finding mission-critical spares is like looking for a needle in a field of haystacks

Most MRO teams don't take the time to assess critical equipment and critical spares. People are so busy trying to find the parts to get the line back up again that they don't assess why the part was missing. ***Most organizations do not invest the time in the planned domain to determine what parts and equipment are most critical***. They wait for the equipment to tell them what's critical when the line goes down. Failure is not used to fix the root cause. The team just jumps to the next thing when it fails. Failure looks different during each incident, but it's just really the same systemic problem of not having critical spares on hand and not understanding what's truly critical.

It's all systemic – the less time to secure the part results in more money spent on the part. The C-suite is impacted because it hits the bottom line, maintenance people are running around the clock, planners are expediting, purchasing is going crazy and Operations is trying to implement workarounds for parts they don't have. The organization is spending a lot of money because everything is at a premium across all departments and suppliers. We've done studies at our clients, and they spend less money on critical equipment when Bills of Material are developed and utilized.

People look at MRO as one big haystack of purchases vs. many smaller orderly piles of purchases. ***MRO teams need to understand and manage critical equipment and critical spares differently than all other MRO purchases***. Defining a Bill of Material for critical equipment and critical parts is a great way to begin on the journey to MRO best practices. This might take time and effort, but it's the only way to root out the cause and solve the problem.

When clients have Bills of Material, they spend less on critical pieces of equipment.

You know you're in MRO trouble when...
your mechanics spend at least 25% of their time looking for parts

Mechanic search time is a big waste of time and misappropriation of resource in manufacturing environments. The systemic problem is, when you're in the reactive search mode, you don't have the resources to eliminate the need for rush orders. And your desire for predictive and precision-based processes to avoid critical equipment failures feels like a pipe dream. While predictive and precision maintenance processes are world-class, most MRO functions are driven by their equipment failures. Becoming world-class at reacting to failures becomes a reality. This is where most clients are when they begin with us. They can't think or act in terms of ordering parts at the exact time they need them. ***Instead they think and act in terms of stocking inventory*** for all potential parts needed.

Since predictive and precision process are lacking, the organization uses an expanding inventory of parts to cover up poor processes. This places the organization on the treadmill of outages, overstocks, expediting, and downtime. ***It is incredibly hard for organizations to leave the reactive mode without facing and fixing the systemic issues***. SDI can scan and assess failed parts to determine why the part failed. We then redesign the piece so it won't fail in the future. We are in the business of managing against unplanned downtime and not in the business of reducing the price of parts to store in inventory.

The pathway to better MRO practices begins with an assessment of critical equipment and critical parts. Simply conduct a Pareto analysis of all purchased parts for critical equipment, then develop and document a bill of materials for those parts. If you can't do this, then analyze critical spares and assess which equipment consumes these spares.

Now planners can tie the Pareto analysis to the weekly production schedule and work to define these specific Bills of Material. Now the planner knows the consumption pattern, the materials have part numbers and defined suppliers, consumption is aligned to stock levels, and the MRO team can be more efficient even when working in the reactive mode.

SDI can scan and assess failed parts to determine why the part failed.

You know you're in MRO trouble when... your skilled trades labor is being utilized for non-skilled tasks

If a mechanic is spending time chasing down parts, the harsh reality is that a facility may need twice the amount of mechanics to get the same amount of work done. ***Companies fall into the trap of paying a premium for technical skill and end up getting a highly paid person chasing down parts***. Expectations of mechanics change over time where they don't expect to start jobs on time because of a lack of parts. The culture of the job-site can be shaped by job delays, de-skilling, wait time, and low expectations for wrench time. Mechanics become so accustomed to the deviation of "no parts" that starts and stops become part of their routine. These aren't bad mechanics, but the system becomes limiting and self-fulfilling. World-class wrench time is 65% and we measured some of our clients at 25% when we first began working with them.

Using skilled trade labor for non-skilled tasks impacts worker productivity, pride, self-esteem, worker satisfaction, and the culture of the organization. Great mechanics come into an unproductive work environment and become frustrated by their inability to seamlessly complete assigned jobs. The culture shapes them to expect less and to do less – they're capable of performing 6 jobs per day and they're completing only one job per day. Literally, you can have this much drain on productivity.

Preventive maintenance gets dropped and all you have is reactive maintenance. The work that should have been completed to avoid the reactive maintenance mode is put off because the urgent stuff is consuming the most manpower. The PM team is dismantled and reassigned to the urgent needs of the moment. The shifting of resources from PM work to reactive work keeps companies in the messy and expensive break-fix quagmire.

Have planning in place – so when the mechanic shows up for the job, all parts are available to perform the job completely and on time. Push to get on a 3-week planning schedule, try to get to a point where operators know when mechanics are coming so they can prepare the site for maintenance.

World-class wrench time is 65% and we measured clients at 25% when we first began working with them.

You know you're in MRO trouble when...

your problem-resolution process is sponsored by Band-Aid: lots of cover-ups to protect the wounds

In reactive mode you don't have time to fix things the right way. Mechanics become burned out from previous rework, urgent service calls, job stop and starts – and the associated overtime. Little time and energy is committed to understand and fix ***why*** the equipment failed. Mechanics are pressured to move on to the next critical job. It just becomes a way of life. There is no way to move beyond this environment ***until you begin viewing the system-wide challenges and opportunities***.

It always appears as a maintenance issue, but incurring many repair stops and starts impacts the entire operation. Equipment begins to fail and the entire culture becomes undisciplined. The Band-Aid fix mentality usually begins because the maintenance leader is asked to cut their budget. The person begins with cutting out the work that is required, but not urgent. ***These cuts push the organization into reactive mode***. Once it starts down this slippery slope, it's hard for existing maintenance leadership to turn it around. The reactive mode leads to higher cost of production, higher inventory costs, more incidents in safety, greater absenteeism, and escalating repair cost.

Over time, the company brings in a new leader to turn things around. New leadership introduces a new mindset, processes, and measures to turn the reactive process around. New leadership doesn't see results right away because they're putting resources on longer-term projects. Work gets done, pride in work emerges, and work on the MRO supply chain system begins to pay off.

Start down this slippery slope and it's hard for existing Maintenance leadership to turn it around.

Islands of IT Functionality

(Business/System Integration)

by Scott Doyle

Vice President, Application Development

Scott oversees the ERP development group as well as the day-to-day operations of SDI's Supply Chain Management system. With over 15 years of hands-on experience as a developer and project manager, he brings a strong understanding of the unique challenges presented in the integrated supply industry.

As part of SDI's commitment to seamless integration with client systems, Scott has been instrumental in moving the technology for EDI-based solutions to SDiConnect, utilizing product dependent methods for direct interface with client systems.

Additionally, his team automated the Accounts Payable process for the MRO supply chain, providing workflow for the thousands of suppliers supported across the SDI enterprise and translating into direct savings for our clients.

"Time-to-value is enhanced when technology is seamlessly integrated to connect and focus all MRO functions on achieving cost, reliability, and supply chain improvement goals."

You know you're in MRO trouble when...
the integration between your IT systems is as effective as empty soup cans and string

We've found that there isn't a system built for MRO from beginning to end. Prior to working with SDI, our customers would modify the SAP work order management module, which works really well for direct materials, but not for the complexities of managing MRO. Those that manage MRO end up piecing together different aspects of different systems that have been designed for managing the direct materials supply chain. ***MRO inventory isn't optimized in ways it should be***, based upon planned demand and forecasting. Planners are burdened with a great amount of manual work to understand if and when materials are available to begin and finish a repair or maintenance job...when scheduled.

Maintenance may incur unplanned shutdowns because they didn't accurately plan and predict the inventory on hand. When the information isn't available to provide insight into the right materials being available at the right time or in the right place, this leads to a fragmented and ineffective repair process.

Improvement toward better practices can begin by driving tighter alignment between the IT function and the maintenance function. From an IT perspective , they say this is how the system works and they try to influence Maintenance to bend the work processes to fit the system functionality.

A different way to look at it would be to work from the maintenance process back to the IT functionality. What are the critical processes and how does the Maintenance organization function? Once this is understood, what can IT do to modify the system features and functions to fit into Maintenance team's workflows? Work back from Operations / Maintenance into the functionality of the system.

Work from the maintenance process back to the IT functionality.

You know you're in MRO trouble when...
you're dizzy from switching back and forth between systems – "the swivel effect"

The "swivel effect" isn't about integrating disparate system – it's about working with data in different forms across systems to perform a single task within the entire end-to-end MRO process.

For example, we had a client who performed all work order matching processes in Maximo and then had an offshore group copy all purchasing data into another system so they could process payables. Additionally, they instituted an email approval process that adds another layer of complexity to the workflow processes. Segmenting information and workflows across islands of system functionality adds a great deal of manual labor and opportunities for mistakes at each step of the MRO supply chain.

Switching between systems impacts the Maintenance team the most. They are responsible for trying to pull together different parts of the MRO process to make sure the planners and mechanics have the right parts for a scheduled repair at exactly the right time. Additionally, they have to make sure their vendors are satisfied by getting paid for the product in a timely manner, and Accounting has the information needed to properly cost jobs and analyze product profitability.

Mismanaged and miscalculated costs are not uncommon in this environment. Planners will often times take the easy way out. Instead of going through the proper procurement procedures, which takes time and effort, ***they just use a P-card and bypass the system all together*** or they will misappropriate costs by aggregating into one big bucket.

Even if it's not a true system integration – at least strive for system alignment. Select the system to serve as the definitive financial structure, and make sure all supporting systems and data conform to the one overriding financial system.

Even if it's not a true system integration, at least strive for system alignment.

Contact SDI

You know you're in good MRO hands when...
you contact a seasoned SDI expert in MRO

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