16 Epic Fails! in MRO Master Data Management
PLUS the fastest way to fix them
CONTENTS

16 Epic Fails! in MRO Master Data Management

When enterprises neglect to control MRO data ................................................................. 3-4
Seven root-cause fails! in MRO Master Data Management ........................................ 5-11
Five dependent-process fails! in MRO Master Data Management .......................... 12-16
Four enterprise fails! in MRO Master Data Management ........................................... 17-20
Scenario: Line Down! .................................................................................................. 21-24
Scenario: Excessive Consumables Demand ............................................................... 25
Roadmap for MRO Master Data Reform ................................................................. 26
Fastest fixes for root-cause fails! in MRO Master Data Management ...................... 27-31
Generic versus niche solutions for MRO Master Data Management ..................... 32-33
About Zynapse/Zycus ................................................................................................. 34-35
When enterprises neglect to control MRO master data

Most business enterprises typically put their energy, resources, and investment into things like product design, sales and marketing, production efficiency, tight process control, information technology, and supply-chain management both for inbound flows of direct materials and outbound flows of finished goods to end customers.

With so many important priorities vying for attention, managing a company’s MRO supply chain has typically been quite neglected.

In today’s economy, however, with much of the fat having been squeezed from direct materials supply chains, enterprises are taking a big interest in MRO. While MRO-related cost savings and process efficiencies are ripe for the picking, though, there is one huge problem: having never before controlled nor managed their MRO item and supplier masters in ERP, most companies’ source data is—to put it bluntly—a mess.

Consider, for a moment, the case of a manufacturing company that has never had a process in place to control when, how, or by whom materials item and supplier masters get created for MRO goods in ERP. Think about:

- The number of plants the company might be operating,
- The geographic (and linguistic) sprawl of its plants,
- The number of machines operating in the plants,
- The number of moving parts within the machines,
- The number of years in which the machines have been operating,
- The number of different people who—over those years—have been called to service or repair the machines and purchase replacement parts for them,
- The sheer quantity and variety of consumable MRO items that get used every day in operations,
- The number of different suppliers that provide those consumable MRO items, and
- The number of mergers or acquisitions the company is likely to have gone through over the years.

Very quickly, one gets a picture of the vast duplication, misclassification, inconsistency, and inaccuracy that permeates typical industrial enterprises’ ERP ecosystems related to MRO. And the MRO data problem sits at the root of a large host of challenges that stand between industrial
companies and optimized MRO supply chains.

In Part 1 of this eBook, we investigate the breadth and depth of the root-cause failures and negative business outcomes that stem from failures to control and manage MRO item and supplier master data.

In Part 2, we look at what companies can do to rapidly repair damage caused by so many years of neglect for MRO master data management and what processes and controls they must put into place if they wish to achieve truly optimized MRO supply chains.

In Part 3, we compare generic to niche Master Data Management (MDM) solutions engineered specifically for MRO.

AT ROOT: Failure to control when, how, and by whom MRO item and supplier masters get created in ERP.
Let’s unleash peoples’ inner Shakespeares by letting each one choose their own words and writing styles to describe MRO items in ERP.

The inevitable outcome is item descriptions that are cryptic, randomly and differently abbreviated, and often unintelligible to anyone other than the person who created them (and even to the person who created them if enough time passes).

Is it a ball bearing, a brg, a ball brg, a bb, b bear, a balbr, a bearing/ball type? a bearing (type unspecified)?
We don’t need a taxonomy! OR Let’s build our own! OR Let’s keep it so simple and high level it will be useless in support of search, reporting, and deep-dive analysis.

Taxonomy is simply a way of categorizing information into small buckets, that roll up into bigger buckets, that roll up into even bigger buckets. It has implications for,

- Search—the ability to easily locate specific MRO items in inventory, and
- Reporting and analysis—the ability gain enterprise-level and detailed views into such things as MRO spending, consumption patterns, and inventory.

Having no discernible taxonomy forces search and analysis activities into labor intensity and failure. Simple, high-level taxonomies may help somewhat with search, but leave detailed drilldown type analyses virtually impossible to accomplish without ad hoc manual or external classification exercises. Using a proprietary taxonomy is better than no taxonomy, but with a standard, rich classification taxonomy like UNSPSC already dominating in other areas like spend analysis and B2B e-commerce transactions, developing and maintaining proprietary taxonomies is wasteful of resources and precludes important integration of information among functions.
Let’s allow facilities managers, maintenance engineers, storeroom and warehouse operators, buyers, planners, and others from anywhere in the world to create new MRO item and supplier masters in ERP without providing protocols, policies or guidelines around how to do it.

What you get (for starters) is massive duplication of records.

- If it is easier to create a new record than to find an existing one,
- If a person has authority to create a new record with no corresponding sense of responsibility for data stewardship, and
- There is no person, policy or process in place to stop a new record from being created,

then, you can bet your paycheck that a new record will be created every time. Even with policies and processes in place, there is a good chance the new record will be created because there is important work demanding people’s attention (and rightly so).
Data-field roulette

*Since there is no single person in our organization who can complete ALL important data fields in our MRO item and supplier masters, let’s allow people to fill in what they know and leave the rest blank.*

Picture the scenario of a maintenance engineer with a down production line, costing tens of thousands per hour. If the process of getting a replacement part ordered and into the plant does not require rich, detailed data entry in specific formats, is he really likely to take it upon himself to fill in the blanks?

Even if the maintenance engineer were willing (or forced) to complete every important field in the item master, what are the chances he would know, off the top of his head, the correct stock UoM, inventory-valuation measure or default G/L method?

This leads to MRO item master data that—very often—excludes critical information, such as manufacturers’ names, part numbers, and important item-attribute information like size, shape, color, and so forth, that would render item records locatable, recognizable and reusable by the next person to come along looking for them.
What are they going to do, sue me?

No ownership

*Surely we can rely on every one’s good conscience and sense of corporate citizenship to be thorough about completing data fields with valid info?*

If you are a consumer making a purchase online and you enter an invalid credit card number or an email address without an @ symbol in it, you are immediately stopped in your tracks. Not true with creation of item and supplier masters in ERP. Few maintenance or facilities engineers have ‘enterprise data stewardship’ written into their job descriptions.

When it comes to MRO, it will always be *justifiably* more important to get a production machine or line back up and running than to fill out a form correctly. A company can have all the governance policies and protocols it wants, but if no one is really minding the store and all a person risks is a slap on the wrist for leaving data out or entering the wrong data, they may feel the risk is worth taking.

Giving people direct access to create item and supplier masters in ERP without a Master Data Management (MDM) solution layer primed for data validation is just asking for incomplete, inconsistent and inaccurate data.
While governance is important, workflow is the frequently missing piece that makes the policies and protocols both painless and easy to enforce. Workflow stops the process if required or correct-looking data does not get entered. Workflow makes certain the right people pay attention and participate in the process. Most important, though, workflow makes it as easy as possible for a person to comply with policy.

Let’s write a 35-page data governance policy, distribute it by email as a PDF to all ERP users, expect them to print it out, read it, and refer to it whenever they need to create new item or supplier masters in ERP.

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Workflow makes certain the right people pay attention and participate in the process. Most important, though, workflow makes it as easy as possible for a person to comply with policy.

Pop quiz
Under which of these scenarios is a facilities manager more likely to select the correct item classification for the speciality adhesive he is trying to requisition?

Select a category from this list of 12,762 possible categories.

Based on the information you have entered so far, here is the most likely category for the adhesive; if that is incorrect, here are some other really strong possibilities.
I can’t believe I actually found this doc in that mess...

Dual MRO flow paths

Let’s keep important MRO content—OEM-recommended maintenance schedules and procedures, warranty information, and so forth—completely separate from info about specific items needed to maintain and repair our equipment.

ERP alone is not intended to store rich content, such as spec sheets, instruction manuals, recall, warranty or other information that might be related to a piece of industrial machinery and its replacement parts.

But when you separate important MRO content, such as documentation around how to install or replace a certain part, you create dual work streams that undermine productivity, successful first-time fix rates and plant uptime, to name a few.

Imagine the scenario where a maintenance engineer needs a part, researches and easily finds the part in inventory, but also finds attached to the record all the important documentation he needs to replace the part properly. Time is saved and the likelihood the machine will be back up and running both quickly and correctly gets much higher.
Combine all—or even just a few—of the root-cause fails and you get not only unnecessary machine, line or plant downtime, but also time spent doing nonvalue adding or even negative-value activities.

Consider some of the ways that downtime can add up to big money, using even conservative time estimates:

1 hr Searching for part in stock
3 hrs Taking suspected part out of inventory, discovering it is wrong part, returning to stock
1 hr
5 hrs Searching for part AGAIN in inventory (not finding it even though it exists)
1 hr Locating, ordering, receiving, logging, unneeded part
24 hrs Waiting for unnecessary part to arrive
40 hrs
1 hr Finding and matching relevant content needed to repair equipment properly and safely
4 hrs Fixing, testing and adjusting machine to hit correct output control limits

At an opportunity cost of $10,000 per hour this calculates to $400,000 for a single instance of downtime of which $360K—or some 90%—might have been avoided by addressing root-cause fails in MRO master data management. By some estimates, the opportunity cost for a downed vehicle-assembly line is closer to $10,000 per minute.
Rush MRO orders

In critical MRO stockout situations, standard procurement disciplines and all of their benefits fly out the window.

At a tactical MRO procurement level, the seven root-cause fails can lead to a broad array of dependent process fails. For example,

- When a part is needed right away and can not be found in inventory, a rush order gets created.
- Rush orders, in turn, subvert standard procurement disciplines such as buying from approved/preferred supplier lists, competitive bidding and negotiation, or searching thoroughly to find acceptable alternatives to typically expensive OEM aftermarket parts.
- Product price and expedited-freight premiums are common, and
- Preferred, low-cost, easily tracked transaction methods may be overridden in favor of speed, corrupting spending data or creating unneeded complexity in spend analysis.
MRO safety stockpiles

Bloated or undocumented MRO inventory, an inability to leverage stock among plants or up and down supply chains, low turn rates, and obsolescence are all outgrowths of the seven root-cause fails in MRO master data management.

While failure to find a part in inventory may lead to an unnecessary order, it can also lead to unnecessary inventory. Safety stock might sit for years, dragging down MRO inventory turn rates and may still be sitting long after a machine has been taken out of service, causing obsolescence in MRO storerooms.

When, due to poor item description, the wrong part gets taken out of inventory, it may not be added back in properly.

What is more, the people who get burned when an MRO part is thought to be out of stock—losing wage hours or otherwise—may take to creating secret stockpiles (invisible inventory) to hedge against future stockouts.

Without any feasible way to create clean, enterprise-level views of MRO stockpiles, inventory optimization endeavors are doomed to fail.
Preventative maintenance

From a risk-management perspective, the Holy Grail in industry is that no machine, line or plant ever stops working unexpectedly. But preventative MRO maintenance can be tricky and risky.

On the one hand, preventative maintenance, which includes things like lubrication, calibration, cleaning, and replacement of visibly worn parts before they break seems like a no brainer. But risks include,

- The potential for errors or damage being introduced during the processes of de- and reassembling machines or parts of machines,
- The so-called infant mortality rate associated with introducing new parts and materials into an existing system, and
- The loss of manual or undocumented adjustments that have been made to ensure a machine is performing within its control limits for quality output.

While preventative maintenance is typically triggered by testing, visual inspection, electronic sensors and/or OEM recommendations for maintenance scheduling, insight into real parts consumption as it relates to particular machines might go a long way to making preventative maintenance more science than art. Dirty MRO master data, however, makes such a scenario impossible to contemplate.
MRO demand forecasting

Inability to accurately read MRO consumption patterns from an enterprise level undermines an organization’s ability to predict demand for consumable MRO items.

Shifting the responsibility for holding consumable MRO inventory to distributors or other local suppliers who can deliver rapidly in response to automated demand or purchase signals is a best practice that relies on accurate, detailed views into historic MRO item consumption patterns.

Industrial enterprises may have bolt-on solutions for creating visibility into MRO consumption (versus spending). But if the item source data in ERP is duplicated, inaccurate, incomplete, and poorly classified, then the process of setting min/max quantities and automated order triggers becomes corrupted as well.

When demand-pull inventory practices don’t work well, people stop trusting them and start building secret stockpiles, which may be invisible to ERP.

Since little attention is paid to maintenance materials in some companies, inventories may be higher than necessary by 20-30% — Vesta Partners
Consider some of the levers an enterprise-level MRO category spend manager can press to save money. Fewer suppliers. Fewer SKUs. Fewer transactions. Volume discounts. Faster deliveries.

Here are just three of many potential scenarios that can unfold with various combinations of MRO master data management fails:

- Category manager spends a year rationalizing SKUs and suppliers for electric motors. Then, a maintenance engineer fails to find the motor he needs in inventory and with no governance or workflow stopping him, creates a new item master in ERP, which leads to a new supplier master being created by the plant-level buyer/planner. So long rationalization!

- Category manager conducts analysis of MRO spending for electric motors but has poor insight into what has been consumed and what is still in inventory. Using spend data only, he makes a deal that will deliver rebates and discounts for hitting certain volume levels. However, because his view of demand was wrong, he misses the targets, so discounts and rebates never get realized.

- Category manager puts a program in place to drive compliance and spending to a contract but, in so doing, strands inventory sitting in MRO stock rooms.
Consider the cumulative effects of fixed and operating costs for:

- Real estate needed to house bloated MRO inventory.
- Internal storage capacity—bins, cribs, shelves and so forth—to organize it.
- Equipment, such as lift trucks, to move it.
- Hardware/systems—computer terminals, scanners, barcode mechanisms, labels, and so forth—to account for it.
- Labor to receive, sort, move items in and out of inventory (both physically and either digitally or on paper).
- Backoffice labor to carry inventory on the books year after year and conduct physical audits of inventory.

Compared to what gets spent on direct materials, MRO spending can seem like a drop in the bucket. But start adding up costs related to bloated MRO inventories and the picture changes dramatically.
Cash management & liquidity

Cash tied up in inventory or spent on non- or negative value adding work is not earning returns or investing in innovation, capital expansion, future business development and growth.

It also forces enterprises to finance more working capital for longer periods than necessary.

Here is a summary of the many buttons that might be pushed to liberate cash and improve an enterprise’s liquidity. In relation to MRO, the lighter-colored buttons are rendered unpushable or only partially depressible when MRO item and supplier master data is duplicated and dirty.

<table>
<thead>
<tr>
<th>Receivables</th>
<th>Payables</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short payment terms</td>
<td>Long payment terms</td>
<td>Reduce</td>
</tr>
<tr>
<td>Fast collection &amp; recognition of payments</td>
<td>Fewer suppliers and fewer total transactions</td>
<td>Remove obsolescence</td>
</tr>
<tr>
<td>Error avoidance</td>
<td>Error avoidance</td>
<td>Shift to suppliers</td>
</tr>
<tr>
<td></td>
<td>Pay ontime (avoid interest)</td>
<td>Make visible to leverage across business units</td>
</tr>
<tr>
<td></td>
<td>Pay early (get discount)</td>
<td>Simplify</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remove duplication</td>
</tr>
</tbody>
</table>

Dirty supplier data plays here
Performance management

Systematic problems like poor MRO Master Data Management can affect many people’s job-performance metrics negatively—in ways that are not under their direct control. This corrupts the company’s performance management system, leading to great personal frustration and low morale.

When a person’s ability to be promoted, to earn a raise or annual bonus is tied to quantifiable metrics, it is exceedingly important that the person be—at least mostly—in control of how their metrics move or do not move. When personal performance metrics become corrupted, unintended behavior—like stockpiling inventory or ignoring maintenance requirements—can ensue. Here is a look at some of the typical job roles and which performance metrics may be corrupted when MRO item and supplier master data is not well managed:

**Line worker/machine operator:** throughput, yield.

**Maintenance engineer:** machine, line, plant uptime, fix speed, first-time fix rate.

**Storeroom operator:** stockouts, requisition fulfillment speed, inventory turn rates, inventory accuracy.

**Buyer/planner:** stockouts, purchase price variance, requisition fulfillment speed, demand forecast accuracy.

**MRO category spend manager:** supply-base rationalization, SKU reduction, inventory optimization, negotiation of cost savings in strategic contracts, realization of cost savings on strategic contracts.

MRO item suppliers may be affected as well. For example, consider the supplier with an exceptional on-time delivery rate. Emergency orders, leading to changed/expedited delivery dates, can wreak havoc on their performance metrics, affecting their ability to earn new business. And, while they may have an ability to challenge and correct bad metrics, time spent doing so is costly and wasteful.
In the next several pages, we lay out a hypothetical scenario to show how the various MRO master data management fails might play out, who is affected by them, and where they create unnecessary costs for manufacturers.

An internal machine part breaks unexpectedly. The machine goes down, bringing an entire production line down with it. The shift foreman places a call to maintenance engineering and everyone working on the line takes a forced break while engineering is *en route* and diagnosing the problem. The engineer diagnoses the problem quickly, but needs to return to his own office in a different building to access reference documentation from the OEM that built the machine.

**Part search fails**

From OEM documentation, the engineer identifies the part he needs, then proceeds to hunt for it in ERP, which takes longer than it should because there is only a high-level proprietary item classification taxonomy in place, item descriptions are cryptic and lack vital attribute information.

The engineer finds an item that *looks* like it might be the right part but, due to incomplete information, he is unsure. He heads over to the designated storeroom and requisitions the part. The storeroom operator locates the part, scans it out of inventory and gives it to the engineer who takes it to the machine. Right part, wrong size. Engineer takes the part back to the storeroom where it needs to be added back into inventory and replaced in its original location.

He attempts another search, halfheartedly because he is pressed for time; does not find the part in inventory even though it is available at a plant less than one mile away. He puts a rush order into purchasing and calls the foreman to inform him the line will be down overnight. Shift foreman sends idle production workers home.

**Procurement/spend management fails**

Buyer/planner receives rush order. Repeats the engineer’s search in ERP to make certain the part is not in inventory. Encounters the same search difficulties as the engineer. Finds what might be the right part. Calls down to the storeroom, causing another physical search. Calls over to the engineer who goes back out to check the second part. Still the wrong part.

The engineer—now hopping mad—demands that the buyer
get an order out immediately.

Because there is now an extreme rush on the order and the buyer wants to be sure the correct part gets delivered, she goes directly to the OEM who built the machine to purchase. She does not look for a lower cost alternative, does not check to see if the part is available through a preferred distributor, and does not competitively source the part. Of note is that the OEM does not make the component part, but sources and sells it at a high mark up through its aftermarket business. Because the OEM is not a strategic or preferred supplier and the order is a rush, there is no question of negotiating price or obtaining a discount.

**Transaction processing fails**

Also, since the OEM is not an approved supplier, the buyer can not use her company’s preferred transaction automation solution and must manually execute the transaction, meaning spend data ends up in an unexpected place for the type of item being purchased. The buyer must also set up a new supplier master record to enable the transaction. She is in a hurry, so fills in only the minimum of information required to get the order out; later, accounts payable will have trouble paying the invoice and will have to backfill important missing information, making the payment late, missing a potential early-payment discount and incurring interest charges.
The OEM has the part in inventory, but not locally so the buyer must also call a freight expediter and pay premium rates to obtain the part in the shortest possible time frame. The buyer lets the engineer know the part will arrive in 48 hours. Now sales must get into the act, adjusting delivery dates for orders that were supposed to be rolling off the downed production line. Likewise, the production foreman and human resources need to arrange temporary furloughs for the workers who won’t be needed until the machine can be repaired.

**Inventory fails**

Meanwhile, the engineer calls the buyer to let her know there are six similar machines operating in different plants and asks her to order extra parts to have on hand for the future. For convenience, the buyer changes the existing order, incurring even greater procurement and freight costs plus costs to receive, move, and process unneeded replacement parts into inventory.

Excess parts go into inventory where they may or may not be needed in the future. What is more, because the process of creating the new item master was handled under rush conditions and not done thoroughly, the potential now exists for the new parts to be missed in inventory four years down the line when a different—but similar—machine goes down in a different plant and is being repaired by a different maintenance engineer.

**Pop quiz**

What might be the total cost associated with such a scenario? Go to the next page for a quick tally using real-life representative values.
Quick cost tally worksheet for line-down scenario involving an MRO part costing just $132

Representative values only. Does not include $ cost to finance excess working capital, $ opportunity cost of not having cash to use or invest elsewhere, or incalculable cost of delaying shipments to customers and effects of lost wages on furloughed workers.
Consumable maintenance and operating supplies—everything from light bulbs and paper towels, to cutting tool inserts and hand tools, to office and kitchen supplies—present significant opportunities for cost savings and avoidance through spend and demand management.

From a spend and demand management perspective, every company’s objective should be to consume the bare minimum of MRO items needed to support acceptable levels of maintenance and competitive operations. But any time there is a disconnection between a buy transaction and a consumption transaction—for example, when MRO items are placed into stockrooms that don’t track consumption to individual cost centers or individuals directly—the potential emerges for invisible inventory, excessive consumption, and even theft. Consider, for example,

- The machine tool operator who secretly stockpiles cutting tool inserts in a cabinet beneath his work station because he has lost overtime work hours in the past due to stockouts during busy season.
- The accountant who likes to print all his documents in color, driving up toner costs,
- The executive assistant who hoards coffee packets, filters, assorted beverages, and paper goods for meetings in her closet, or
- The mother of four who saves a bundle on school supplies, paper towels, and cleaning solutions by spiriting these items home in her tote bag.

Accurate enterprise-level views into MRO inventory and actual consumption are the only ways to pinpoint either excessive consumption or the likelihood of undocumented inventory. Clean, enriched, unduplicated MRO item and supplier master data that is accurately and granularly classified to the same standard taxonomies that are used for spend analysis forms the foundation required for being able to see and benchmark MRO consumption patterns in ways that enable true demand management to begin.
With such MRO scenarios playing out every day all over the world, it would seem the business case for MRO-related master data reform is a no brainer.

But most major MDM reform initiatives are inspired by either,

- An ERP upgrade or
- A merger or acquisition where ERP harmonization is considered necessary to achieve expected financial/operational synergies and benefits.

Either way, the driver is that money gets set aside automatically for MDM harmonization work to be done. But because those primarily IT—or finance-driven initiatives are not focused on unlocking the latent opportunities in having clean MRO item and supplier master data, they often fail to fix the root-cause fails outlined in the pages of this eBook. For example, they may place insufficient emphasis on deduplication, correction, and enrichment of existing records. What is more, they often fail to put the processes and tools in place to ensure MRO item and supplier master data stays clean moving forward. The result: Root-cause fails reassert themselves, causing ERP item and supplier master data to re-descend into disarray as time passes.

In the remaining sections of this eBook, we lay out key considerations for supporting and pursuing MRO-specific master data reform initiatives.
Autogenerate standard long and short item descriptions

*Deploy an MDM solution layer for MRO that automatically generates standardized short and long item descriptions from key item attribute fields.*

When selecting the right MRO Master Data Management solution provider, be sure you can check the following boxes:

- Possesses deep MRO domain intelligence for defining key attribute fields to be included in item descriptions (will vary by item category)
- Performs consistent and intuitive abbreviation and sequencing of key attribute information in character-restricted item short descriptions
- Offers automation solution for rapidly and cost effectively updating historic MRO item master descriptions to new standards
- Invests in extensive MRO content engine to backfill missing item attribute data, correct and standardize historic item attribute fields, and prepopulate new entries based on dynamic, always up-to-date information sources
- Has ability to work in multiple languages (if required)

**CAUTION!**

Without automation technology and deep domain intelligence to speed the process, ensure consistency, and limit manual labor, ROI on remediation of historic MRO item and supplier masters may be exceedingly difficult to demonstrate.
Adopt standard, granular classification taxonomy

As the UNSPSC taxonomy has become the standard for classifying spending data and B2B e-commerce transactions, adopting the same standard for MRO item master classification enables transaction, inventory, and consumption data to be viewed through a single, powerful lens.

When selecting the right MRO Master Data Management solution provider, be sure you can check the following boxes:

- Offers automation solution that can quickly and accurately extract and analyze cryptic text to classify historic item master data
- Uses statistical probability models, MRO domain expertise and up-to-date content libraries to minimize burden of manual validation work associated with remedial classification and harmonization of historic item masters
- Is flexible; can map UNSPSC to custom taxonomy (if one exists) and/or build out taxonomy in item areas where UNSPSC may lack sufficient detail
- Solution recognizes new items being created (based on text being entered); suggests correct classifications and/or other close classification options
Combine governance w/workflow for MRO new item master creation

There is no getting around the fact that enterprises need people with responsibility for item master stewardship and policies to support them. Niche MDM solutions for MRO enable just a few data stewards to manage and enforce policies easily even in large, complex organizations.

When selecting the right MRO Master Data Management solution provider, be sure you can check the following boxes:

- Eliminates direct access to ERP; MRO item and/or supplier masters get created and validated outside of ERP and published to ERP through small control organization
- Forces—but also helps with—completion of required data fields
- Automates validation of data inputs
- Offers fully configurable account permissions and work flow paths
- Supports multidirectional work flow paths—records can be sent backward in workflow for correction or in various directions for cross-functional data contributions before being published to ERP

Best practices

- Establish clear owner(s) of MRO item master data
- Recruit champions to collaborate actively on harmonization and implementation with MRO MDM solution provider
- Pay close attention during attribute definition, harmonization, and validation stages
- Adopt standards wherever possible
Make compliance easy with advanced automation features

There is workflow that forces compliance, for example making sure required fields get filled with valid data. Then there is workflow that makes compliance painless and fast for system stakeholders. The best solutions offer both.

When selecting the right MRO Master Data Management solution provider, be sure you can check the following boxes:

- Solution prepopulates attribute fields, suggests correct inputs, and/or dramatically narrows field of possible correct inputs, based on text entered by end user
- Solution automatically locates potential duplicate records at source (for example, using fuzzy match)
- Offers ability to create new items based on existing ones; adding only incremental or differential attribute information
- Provides easy ability to route and solicit collaboration on record creation from multiple parties
- Offers in-context help features
Make all MRO-related information as easy as possible to find

Fast, powerful, intuitive MRO item-search capability solves so many problems—duplication, bloated inventory, unnecessary downtime and purchases, productivity loss. Add rich MRO content to the mix and watch multiple MRO success metrics start to skyrocket.

When selecting the right MRO Master Data Management solution provider, be sure you can check the following boxes:

- Provides context-sensitive search capabilities, making it exceptionally easy for maintenance engineers, procurement professionals, storeroom operators, and many others to intuitively and speedily zero in on the items for which they are looking
- Offers ability to search using an item’s technical specifications
- Enables rich content—for example, OEM repair documentation—to be attached and managed in tandem with item masters
Theoretically, generic MDM solutions,

- Avoid creation of data silos
- Avoid duplicated investments that result when different functions decide to address their own problems related to master data management at different times and from bottom-up perspectives

However, generic MDM solutions have many drawbacks that must also be considered carefully. For example, they,

- Require an enterprise-level commitment to master data reform, which can take years (if ever) to obtain and implement
- Require substantial internal IT resources for configuration and implementation
- Take internal IT resources away from other value-adding and revenue-generating activities
- Tend to be technology- versus process-driven, which means the enterprise must still go about identifying best processes and configuring them into their MDM solutions
- May not be equipped to correct inaccuracies or to fill missing blanks in historic master data
- Do not always place a tightly controllable layers between people and ERP
- May not incorporate standard taxonomy usage, support for multiple languages, or specific domain knowledge related to MRO that can speed harmonization initiatives dramatically
- May not place sufficient emphasis on deduplicating items and suppliers
- May imagine a process for MDM, without suggesting an organizational or governance policy structure to support it

Continued on next page →
May rely on governance policies rather than workflow to ensure ongoing MRO master data integrity

Also, by attempting to be all things to all functions, generic MDM implementations may require concessions to corporate politics and/or standardization that dilute practical value to the variety of functions that are struggling with real information deficits.

By comparison, niche solutions for MRO Master Data Management are engineered with best practices and processes embedded. They also,

- Take people out of the ERP environment and put them into an environment that is easy to learn and support
- Create a layer between people and ERP that is tightly controlled with permissions and workflow
- May use domain-specific automation technology to analyze and parse historic MRO master data from cryptic text fields
- Will be supported by solution providers who possess deep MRO domain knowledge. For example, the solution provider may already know the item attribute fields necessary for describing and classifying bearings accurately; likewise, they will have insight into how attribute fields differ from one MRO product category to the next, saving substantial time and effort and leading to better, more granular information
- Will be supported by rich, up-to-date content libraries for enriching older data. For example, they may be capable of plugging in missing manufacturers’ part numbers, item sizes and other important attribute information that may be missing; of note, is that such content libraries are built by continually crawling and scraping MRO suppliers’ web sites, electronic catalogs and structuring up-to-date information found there, an investment that would be exceedingly impractical for a single industrial enterprise to attempt on its own
About Zynapse Harmony and Integrity Solutions

Fixing both history and the future

Leading companies are increasingly embracing solutions that combine automation with domain intelligence to ensure that large MRO item master harmonization projects are delivered successfully on-time and within budget. Best-of-breed solutions, such as Zynapse Harmony automate the material master data harmonization process, ensuring scalability, consistency, and reduced total project costs.

Zynapse Harmony is tailor made to deal with Global 1000 material master data harmonization challenges such as: high volumes of data, multiple languages, nonuniform commodity coding standards, poorly classified data, poorly structured descriptions, and incomplete data,

Using statistical artificial intelligence—versus inflexible rules—the Zynapse Harmony solution analyzes cryptic text, classifies and enriches MRO item records according to the global UNSPSC product coding standard or to other standard or proprietary part numbering systems that may be in use. The Harmony solution also parses unstructured material-attribute information from text fields into attribute fields selected by the client, depending on level of granularity desired. Next, Zynapse Harmony uses a host of sources—existing customer text fields, an extensive content library built up over many years by Zynapse, and information crawled and scraped continuously from suppliers’ web sites and electronic catalogs to enrich and fill missing material attribute information. Finally, Zycus Harmony looks for exact matches by supplier names and/or part numbers to identify and eliminate duplication in a client’s material master data. From the parsed and enriched material attribute fields, Zycus Harmony then generates normalized short and long material descriptions that can be published to ERP and to ongoing material data management (MDM) systems such as Zycus Integrity.

Where Harmony ends, the Zynapse Integrity Solution picks up to manage material master creation and maintenance going forward. Zynapse Integrity is fully configurable and can be mapped to any desired workflow.

Requiring users to enter good data into Integrity ensures that part descriptions—especially the 40-character short descriptions that typically show up on bills of materials—are always easy to read and interpret correctly in procurement, engineering, and on plant floors.
Zycus continues to deliver on its heritage of providing best-in-class spend management solutions that are world renowned for delivering an accelerated return on investment through superior user adoption to create Maximized Savings.

Zycus’ solutions are built from the ground up combining cutting-edge technology and domain expertise, enabling higher performance and sustainable value to organizations worldwide. Zycus provides global spend management solutions to more than 200 leading Fortune 1000 customers that consider spend management software, processes and technology strategic to their competitive advantage. Zycus Spend Management solutions automate and streamline the processes of spend analysis, strategic sourcing and contract management.

With more than 200 global proven implementations, Zycus’ solutions have emerged as the global favorite. Zycus has more than 400 employees across North America, Europe and Asia-Pacific. To learn more about Zycus, e-mail information@zycus.com or visit www.zycus.com.