

MASTER-DATA MANAGEMENT: THE LIE DETECTOR OF BUSINESS

HOW TO EXECUTE A MASTER-DATA MANAGEMENT
STRATEGY THAT WORKS

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EXECUTIVE SUMMARY

THE TRUTH, THE WHOLE TRUTH, AND NOTHING BUT THE TRUTH

Numbers don't lie. Or do they? Think of master-data management (MDM) as a single source of truth where accurate data is kept about everything vital to your company. If MDM is defined as the sole source of master data containing the "actual version of the truth," then anything less would contain untruths – bad numbers and wrong data. And the truth is, many discrete

A comprehensive MDM software solution is not a magic wand that ends all of your data issues. You must also have a well-thought-out MDM strategy to help you structure how you are going to gather, control, and distribute data in your organization to better manage your data problems.

Industrial machinery and components (IM&C) manufacturers today are relying on untruths – inaccurate and inconsistent data – often without even knowing it.

These manufacturers trust data that exists in disconnected information silos across the enterprise – each silo with its own "version of the truth." The enterprise-wide combination of truths, half-truths, and untruths in the data puts the whole business in jeopardy by limiting – sometimes with catastrophic

results – visibility of the business, which impedes decision making, discourages innovation, and muddies communications.

MDM avoids the dangers of inconsistent data, including catastrophic events, before they happen. But first you need an MDM strategy that works. This white paper helps you create one. It discusses the challenges surrounding MDM and ways you can simplify data complexity across the enterprise. It shows you how other discrete manufacturers are gathering, creating, standardizing, and using master data up and down the supply chain to speed product and process innovation, shorten product life cycles, and reduce time to market.

When conflicting data definitions have been used in an organization for years or decades, it is difficult for a company to see how high-quality master data relates to business benefits. Nevertheless, your master data – all the information about your products, customers, employees, and suppliers – is one of your company's most valuable intangible assets. It merits a powerful business case. The whole truth about creating global master data by harmonizing your disparate data sources is this: It can be one of the most valuable decisions you ever make.

SUCCEEDING WITH THE TRUTH

BUILDING A BUSINESS CASE FOR MASTER-DATA MANAGEMENT

Discrete manufacturing today means facing challenges on all sides of the business. Growing complexity, increasing global competition, shorter lead times, declining profits in product sales, and the constant pressure to reduce costs are causing many discrete manufacturers to reconsider their traditional business model. No longer is it enough for you to just make and sell products and spare parts. To create new streams of revenue, you need to go to the next level – from just making products to innovating them and creating product offerings that deliver more value to your customers.

For example, before it produces a single product, Toyota uses virtual simulation to support its objective of zero changes from its production drawings.¹

The ability to innovate is only one of many issues that are increasing the importance of master-data management (MDM) for the industrial machinery and components (IM&C) industry. Another is the amount of data that has escalated in most companies over the years. In addition, global sourcing, outsourcing, and extended enterprises are increasing the need for reconciliation using centrally stored data. Also, with

data that has been harmonized and unified from disparate data sources. In a landscape where information islands populate the enterprise, including inconsistent databases and conflicting spreadsheets, how do you find the truth? Where is it in all of the separate customer and product information files, multiple applications, online and hardcopy reports, and disconnected databases, not to mention external partner and supplier reports and communications?

There is a way, and an MDM strategy can find that way for you. Until then, however, the challenges that discrete manufacturers experience around product information will continue to be felt throughout the enterprise. This starts at product sourcing and product-line management, through sourcing and procurement operations, and stretches to catalogs, Web publishing, sales, and e-commerce. Nevertheless, the individual business users in product management, operations, and product marketing may not even be aware that a product information problem exists, even though the signs of a company operating on disconnected data systems surround them.

For example, like every discrete manufacturer, you need to create and manage rich product content – specifications, copy, images, and product relations – but you do not have a system in which to do this effectively and efficiently. Because your product information is stored in multiple systems across the business, your business users are not sharing a single view of the data. And because the data is

“Without access to consistent and accurate data,” states the New Paradigm report, “much manual effort goes into reconciling and understanding data anomalies. Consistent and accurate master data allows you to automate portions of your decision making: you can make better, quicker, and more profitable decisions.”

Innovation, however, demands accurate and complete product and customer information and a 360-degree life-cycle view of the supply chain. Competing with innovation also demands agility, creativity, and speed, in addition to early collaboration and cooperation between product design and development, product planning, and marketing based on consistent, global master data. Early collaboration using consistent master data leads to subsequent production and process cost efficien-

the continuous rise in mergers and acquisitions throughout the industry, experience has shown that newly acquired data is slow to be absorbed into a company without a functioning MDM structure of its own.

The Importance of Accurate Product Information

Overcoming these issues and avoiding the risk of doing the right thing with the wrong data require consistent master

1. Don Tapscott, *Competing with the Truth: Master Data Management in Discrete Manufacturing* (New Paradigm Learning Corporation, 2006) pg. 1.

dispersed throughout the enterprise, just thinking about cleaning up and harmonizing your product information is difficult.

So is data distribution. Internally, it is hard to get the right product data to sales, telesales, and product management in a complete or timely manner. And externally, you need to get information to print publishing, your Web site, customers, and distribution partners, but it is a heavily manual and error-prone process.

Don Tapscott, in his *New Paradigm* report, defines master-data management as “the pursuit of the single, correct version of the truth that enables better, faster decision making within the firm and seamless integration with partners outside corporate walls.”

Without a single source of product data, the manual collection and processing of product information is slowing down your new-product introductions – a main revenue driver for most discrete manufacturing companies – and inhibiting time to market. Moreover, you need parametric data for Web sites, but your current systems do not allow you to create it.

Your customer support and service are affected, too. Service and support require quick access to detailed information for products, including substitute or replacement products. Likewise, customers require detailed, attribute-specific product information published to them for their standardized global procurement processes. However, if your current software does not support this level of detail, response and compliance with varying customer requirements are slowed proportionally.

Data Barriers to Growth Priorities

To succeed, all of the top priorities among discrete manufacturers today depend on consistently reliable master data. These priorities begin with the innovation and creation of successful, new products using product life-cycle management (PLM) software to improve efficiency throughout the life of the product. In addition, managing the details of outsourcing is a key priority for many manufacturers, as is time to market and being first with new-product ideas.

With globalization, compliance with international laws and regulations, especially as they concern safety, labeling, and environmental issues, is an ongoing concern in discrete manufacturing. So are cost reduction and the need for efficiency improvements through the implementation of, for instance, lean manufacturing principles and techniques like kanban. To compete and meet customer demand, manufacturers are focusing on additional manufacturing strategies, too, like just in time (JIT), total quality management

(TQM), design for manufacturability (DFM), and, of course, material requirements planning (MRP).

With growing product lines, protection for intellectual property and from spare-parts piracy is also a top concern requiring tight distribution and access security. Finally, discrete manufacturers are relying increasingly on supplier relationship management software and leveraging business intelligence applications to help achieve substantial savings from the supply chain in the form of volume discounts.

Unfortunately, in most IM&C companies, a large gap exists between these priorities and the capabilities of their information and supply chains to achieve them. Because so much data and independent versions of the truth are being tossed around the enterprise, the corporate information system is already strained. And while new-product development is a priority for most manufacturing companies, many do not have the product life-cycle software to support it.

Nor do they have the master data upon which PLM depends. In his white paper *Competing with the Truth: Master Data Management in Discrete Manufacturing*, best-selling business author and *New Paradigm Learning Corporation* founder Don Tapscott says, “Quality reference data is foundational to reliable information exchanges that span the product lifecycle.”² However, hard-copy design drawings with yellow stickers on them – still in use by some manufacturers

2. *Competing with the Truth*, pg. 3.

today – hardly qualify as master data. Even though most design drawings are in electronic form in most manufacturing companies, old practices die hard.

Yesterday's hard-copy design drawings with yellow stickers have been replaced with today's digital files attached to CAD drawings. However, these digital design drawings are not fully supported when disconnected information systems make it difficult to update and change them. These information systems cannot communicate without a common set of logical and standard master-data definitions and values in place. Here is a typical example of the need for master-data definitions: Different business partners might refer to a 20-inch pipe as 20", 20-inch, 20 inch, 20-in., 20-in, or 20IN. By standardizing all data, the resulting master data puts everyone on the same page speaking the same language.

In addition, information systems, of which MDM is a central component, are supported by service-oriented architecture (SOA), which is strategic to enabling innovation today. The New Paradigm report describes the impact of SOA on the IM&C industry: "As businesses become information businesses, fluid congregations of networked businesses (business webs) and supply chains predominate, and data issues become business issues.

The firm with the best data wins."³ Finally, because many manufacturing companies have grown by acquisition, multiple CAD systems and point solutions exist where independent product-

design information may be stored in places that are disconnected from the other CAD systems and solutions. According to the New Paradigm report, "Many of these systems begin with the ambition of creating a single version of the truth for the enterprise, but without master-data management, you simply create another set of inconsistent data."⁴

The High Cost of Disparate Data Sources

The final data barrier to growth from disconnected and inconsistent data is cost. The issue of higher cost from lower-quality data starts at the beginning of the process – when a request for a new part arrives. With master data at your fingertips, it is possible to identify an existing part quickly for reuse, as opposed to designing a new one. But without master data, the easiest option is often to design and make a new part, even though it is usually a more expensive process to do so.

Making a new part, instead of reusing a previous design, adds product complexity, driving up manufacturing costs and time to market. It also increases the cost of dealing with the supply chain. Common reference data is a prerequisite to sharing information with suppliers and vendors, which is why data-minded manufacturers are gathering, standardizing, harmonizing, and sharing the resulting master data across the supply chain.

In manufacturing, and especially electronics manufacturing, raw material and component prices change frequently.

Without master data, which considers the current costs of materials and components, it can be easy to lose track of costs that were set weeks, months, or even years ago. An MDM solution includes an automated tool with access to component-level design detail to help you benefit from decreases in component price.

Without master data and the component information it contains, compliance costs can skyrocket. This is particularly true when complying with international laws, like the Restriction of Hazardous Substances (RoHS) directive in Europe. Furthermore, chaotic and unstructured data can significantly impede business as a whole. It can fuel higher costs, slow down communications and collaboration, and harm customer and supplier relationships.

3. *Competing with the Truth*, pg. 4.

4. *Competing with the Truth*, pg. 4.

BUILDING A MASTER-DATA MANAGEMENT STRATEGY

CONSIDERING YOUR OPTIONS

Developing a central corporate repository of standardized information based on global master data obviously requires careful consideration. This begins with how you are going to manage the data you use, which depends

Obstacles to creating and managing global master data can be overcome with a comprehensive MDM solution flexible enough to support your heterogeneous computing environment. With a comprehensive MDM solution,

Instead of stopgap measures, what is needed is an MDM strategy that considers what matters most – reducing complexity and harmonizing disparate data sources without disrupting the business.

Today's comprehensive MDM software solutions support phased implementations. They enable early wins to help build a strong business case for rollout throughout the enterprise.

on the data's unique characteristics. For example, master data is reference data about key entities in your organization, such as customers, products, and employees. Unlike transactional data, such as a sales order, master data does not change frequently and typically involves a relatively small number of key attributes.

Depending on the size of your enterprise and where and how you use data, the harmonizing of disparate data sources to achieve master data consistency across your distributed IT environment can be a difficult mission to accomplish. True integration at the business process level – where the real value of master data lies – is usually not easy to attain. For some manufacturers, if it were possible to simply start over and construct a whole new enterprise information system, they would. However, there is no need.

instead of you conforming to the solution, the solution conforms to you, minimizing any risk of losing competitive differentiation.

To avoid the implementation of a full-blown MDM software solution, yet still have some semblance of master data, it is not uncommon for companies to attempt extracting their inconsistent data from separate data sources and compiling it into a more consistent data warehouse. From this data, management can then get a better estimate at data reconciliation and consolidation. At the summary level, this is acceptable; however, the data still contains inconsistencies and errors because it has not been cleansed and harmonized. These inconsistencies prevent the use of the data warehouse as a production data store or even for enterprise performance management purposes.

Achieving a Cross-Enterprise Product View

A comprehensive master-data management strategy and implementation must be capable of collecting the various versions of truth scattered across the enterprise and then standardizing and harmonizing them into a single, actual version of the truth. In the New Paradigm report, master-data management is defined as “the pursuit of the single, correct version of the truth that enables better, faster decision making within the firm and seamless integration with partners outside corporate walls.”⁵ Additionally, MDM helps to enable investments in distributed technologies, like Web services and SOA, that make integration easier and support dynamic business relationships.

In the search for savings and efficiency improvements, design for manufacturability, supported with effective data management, has made significant contributions, leading to simplified design for faster manufacturing, lower costs, and easier service and maintenance. These benefits are compounded when manufacturers use PLM to enable a cross-enterprise view throughout the entire product life cycle.

5. *Competing with the Truth*, pg. 5.

Master data based on a cross-enterprise, life-cycle product view optimizes decision making by providing accurate and timely automated data when and where it is needed. “Without access to consistent and accurate data,” states the New Paradigm report, “much manual effort goes into reconciling and understanding data anomalies. Consistent and accurate master data allows you to automate portions of your decision making: you can make better, quicker, and more profitable decisions.”⁶

Cross-enterprise information sharing using master data also enhances collaborative product innovation. The sharing of clean reference data allows work in parallel, enabling marketing to pre-view product-line drawings early in the design phase. It can also enable portfolio management approaches to new-product introductions. Cross-enterprise information sharing using master data results in faster time to market with new products. This is most applicable to discrete manufacturers for which the capacity to lead innovation is a competitive advantage.

The Ideal Master-Data Management Solution

To support effective master-data management and better operating performance, a comprehensive MDM software solution addresses three elements.

Master-data consolidation means matching, normalizing, cleansing, and storing master data imported from client systems. The principal activities of master-data consolidation are identifying identical or similar objects spread across local systems, building consolidated master data, and providing ID mapping for unified, company-wide analytics and reporting.

Master-data harmonization ensures that master data is synchronized across heterogeneous system landscapes. Extending the scope of master-data consolidation, harmonization encompasses the distribution of consolidated, globally relevant information and the enrichment of client application systems with locally relevant information.

Central master-data management speaks to the maintenance and storage of master data and the development of distribution mechanisms for delivering master data to the systems that need it. This activity differs from master-data harmonization in that master data is created centrally using a rich client. You can then interactively distribute information to clients as required.

The ideal solution integrates seamlessly with your organization’s and partners’ existing infrastructures. Additionally, the solution is intelligent enough to ensure ongoing harmony of accurate and up-to-date information from disparate sources and is readily accessible to support the needs of the entire business ecosystem.

During the implementation, leading-edge technology helps you streamline and improve the aggregation of master data from disparate sources. The ideal solution manages the entire process, including deduplication and normalization, ID mapping, matching and merging, staging, change tracking, interactive data-quality analysis, and ad hoc consolidation. You can then analyze consolidated data using a business intelligence solution.

Ideally, users experience near-real-time search performance, with every dimension interlinked to multiple search mechanisms. You should be able to search an entire repository easily with any item or group of items, with partial strings and equivalents indexed to increase search results. Performance should be measured in milliseconds – even for repositories containing millions of records.

Implementing a Master-Data Management Solution

A comprehensive MDM software solution is not a magic wand that ends all of your data issues. You must also have a well-thought-out MDM strategy to help you structure how you are going to gather, control, and distribute data in your organization to better manage your data problems. But beware: “The creation and management of global master data,” says the New Paradigm report, “touches every aspect of how an organization works, sometimes colliding with long established silos. But where some see disruptive risk, others see reward: this very collision and resulting rework reveals new sources of value creation.”⁷

6. *Competing with the Truth*, pg. 6.

7. *Competing with the Truth*, pg. 6.

The MDM software implementation should avoid a sink-or-swim, big-bang approach and take a phased, incremental approach to help you gradually untangle your data. A phased implementation consists of an initial implementation followed by step-by-step global rollouts. Today's comprehensive MDM software solutions support phased MDM implementations. They enable early wins to help build a strong business case for rollout throughout the enterprise. No two MDM implementations are the same and a number of factors need to be considered.

Management Buy-In

Your master data should reflect and link to your company's business imperatives. In building your business case, the MDM implementation should be addressed as a business, not an IT, issue. You need complete management buy-in and support to implement a comprehensive MDM solution. The New Paradigm report gives advice from leading practitioners of MDM.⁸ Break the problem into manageable pieces. Smaller groups of people can reach decisions on different parts of the MDM solution, and these decisions can be combined into a total solution. Start with low-hanging fruit to enable early wins and increase confidence in the new solution. And focus only on useful differentiation, avoiding extensive customization, which can prevent future software upgrades from the software vendor. Most of your processes are commodity processes. You should avoid customization to accommodate a commodity process.

Total Cost of Ownership

It costs money to manage data, but it costs even more when the data is poorly managed. The implementation of

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an MDM solution signifies a commitment to superior data management. The implementation of a comprehensive MDM solution can bring data management costs down. It enables you to meticulously manage master data about your products, customers, suppliers, and employees to achieve significant total cost of ownership (TCO) improvements.

Service-Oriented Architecture

In the transition from just making products to innovating them, consider the role of service-oriented architecture in your MDM implementation strategy. SOA makes combinations of multiple services available through composite

applications. These applications combine functionality from different sources, such as Web services and functions from other applications. Your business users can embed global master data directly into new or existing processes.

People

Change management is essential to your MDM solution implementation. The human component is often more difficult to manage than the technical issues of the implementation. Some of your people may resist the new ways of managing data in the company, especially if they have been doing it one way for years or even decades. Long-standing information silos and processes must be broken down. Everyone in the company needs to be involved in the transformation to using global master data. Even though the benefits of shared information are appreciated by all, some users may find it hard to give up their old ways. Their resistance creates barriers to information sharing for everyone. Your stakeholders from marketing, engineering, manufacturing, and IT – all of which exist in different worlds – must agree with the MDM strategy and the need for a common language between them.

⁸ *Competing with the Truth*, pg. 8.

Opportunity

MDM can shine the light on new opportunities for information sharing and collaboration enabled by new processes. You should not limit the implementation to automating existing processes, but use it to harness the true power of MDM.

Data Mining

Dig for relevant data stores buried in your organization. The objective is to eliminate fragmented data, making all data ubiquitous. This data should be accessible to end users for use in their composite processes. The goal is to discover the data, then make it easy to access, see, and use, for example, on the company intranet.

Discipline

MDM requires a new mind-set. The New Paradigm report recommends that the discipline of MDM be fostered throughout the enterprise with ongoing management support and focus to ensure that it becomes a living process in the organization. The report also recommends that you identify, standardize, clean, and harmonize master data – in that order.⁹ This ensures that MDM standards go down to the instance level to make sure my part number 10007 is not your part number 70001. But be aware that standardization should be flexible enough to accommodate local needs and not so stringent that they inhibit innovation and differentiation.

Because they deal with one of your most valuable intangible assets – your data – MDM implementations must be

executed carefully. A clear view of where you are and where you want to go is essential to a successful go-live. However, comprehensive MDM software solutions now include functionality that accelerates and simplifies the implementation, including tools to help you automate the data cleansing process. Following a successful go-live and user acceptance, the business benefits derived from reliance on one set of master data can begin to reward the MDM implementation effort in major ways.

9. *Competing with the Truth*, pg. 11.

BENEFITING FROM SUPERIOR MASTER-DATA MANAGEMENT

A COMPELLING CASE FOR MASTER-DATA MANAGEMENT

Break the problem into manageable pieces. Smaller groups of people can reach decisions on different parts of the MDM solution, and these decisions can be combined into a total solution. Start with low-hanging fruit to enable early wins and increase confidence in the new solution. And focus only on useful differentiation, avoiding extensive customization, which can prevent future software upgrades from the software vendor.

Excelling at master-data management brings several types of business benefits. SAP has determined that effective and efficient use of MDM information benefits organizations in operations, insight, and compliance.

Improving Operations

By improving day-to-day operations, companies can reduce costs and potentially increase revenue.

Capture New Revenues

Effective master-data management can save time and money – and even enable the capture of incremental revenues.

A good example of savings is streamlined pricing updates. As prices change, employees can quickly and effectively access and disseminate updates by using product master data. New price points are reflected rapidly across all channels, preventing the revenue leakage that frequently results from slow price changes.

Improve Freight-Data Accuracy

Similar benefits result from accurate freight data. When engineering enhancements are made to manufactured products, the weights and dimensions of those products often change. Companies that effectively manage product master data can quickly make sure that any prepaid freight charges are accurate and avoid overpayments caused by out-of-date product information.

Assure Success with Sequential Processes

Sequential processes within manufacturing can contribute to the ultimate success of a product. For example, a research and innovation group may design a next-generation product. But if the subsequent process used to launch that product continues to rely on an older product code with different characteristics, the results can be disastrous.

Reduce Mailing Costs

Reduced marketing mailing costs represent yet another savings opportunity. As customers move or households change, managing customer information becomes increasingly complex. Consider that, at one time or another, almost every consumer has received multiple pieces of the same promotion-

al mailing. Most times, the culprits are slightly different spellings of the same name or the names of multiple family members appearing on the same list. Master-data management makes it faster and easier to reconcile and “dedupe” mailing lists – a big boon when per-piece production and shipping costs often exceed \$1.00.

Improve Dissemination of Product Data

Master-data management enables product-content management to support the requirements of rich product-content and cross-media catalog publishing. By leveraging product-content management, you can consolidate, centrally manage, and publish product data across your enterprise and among trading partners.

Reduce Marketing Costs and Drive Revenue

With master-data management, you can reduce marketing execution costs by flowing structured and unstructured product master data directly into print, Web, and CD catalogs. The net effect is less time and effort needed to develop and maintain these items, as well as the opportunity for marketing resources to focus on higher-value activities. Similarly, organizations with large and diverse product sets can quickly and easily develop targeted marketing content. This type of marketing can help drive incremental revenues.

Reduce the Cost of Global Data Synchronization

Superior master-data management helps you reduce the cost of global data synchronization (GDS). GDS helps your organization effectively manage trade-item exchanges via the Global Data Synchronization Network (GDSN) using 1SYNC (formerly UCCnet and Transora). 1SYNC enables the registration and publication of product information, such as weight and dimensions, by providing a global repository for standardized item, location, and trading-partner data. More and more manufacturers and retailers exchange product information electronically, so they can expect to save time and money by working through the 1SYNC community.

Increasing Insight

With increased visibility into operations, companies can experience enhanced and accelerated decision making.

Improve Organizational Performance

Organizations that maintain a single source of truth – their master database – nearly always understand their operations better than those that do not. Clean, accurate data improves your company's ability to track, measure, and interpret organizational performance, so you can make better business decisions.

Reduce Incongruities

Imagine a ream of paper procured by an office manager through a purchasing portal. Because this item could potentially be categorized by different user groups as "paper," "stationery," "office supplies," or "copying accessories," it is extremely difficult to know

how much is actually being spent on this item. Likewise, procurement organizations looking to quantify total spend with a particular vendor for negotiation, rationalization, or contract-compliance purposes are frequently hamstrung by different product naming conventions and the likelihood that the same supplier is listed in different ways within different systems. Master-data management is the key to reconciling incongruities and performing effective global-spend analysis.

Maximize Revenues

Another example of insight benefits is the ability to efficiently analyze product databases to maximize revenues. Without precise master-data management, these activities are difficult and often unsuccessful. The implementation of a master-data management solution can help product and marketing managers identify relationships between and among products. This insight can lead to increased opportunities for cross-selling and up-selling, resulting in a rise in the average consumer sale.

Quickly Reconcile Customer Information

Customer insight through customer-data integration is another MDM advantage. Marketing and sales organizations, for example, often want to segment their customer base to create differentiated services or support activity-based costing programs, and they need accurate customer data to do so. Master-data files that accurately reflect customer hierarchies, such as holding company or subsidiary relationships, make it possible to obtain and reconcile customer information quickly, leading to better pricing, marketing, and service decisions. For example, an

electronics distributor could determine that, although an OEM's purchases are spread across a number of subsidiaries, its aggregate spend justifies a higher level of service – perhaps phone support rather than Web support.

Improve Analysis of Employee Information

Still another benefit is better insight into your company's workforce. With more organizations assuming a global presence, it is difficult to collect and analyze employee information. Employee master data can be the key to effectively scrutinizing employee headcount, job descriptions, salaries, and performance records.

Ensuring Compliance

These days, regulatory compliance is a critical corporate concern. Effective management of master data can help assure regulatory compliance, whether you are a U.S. company affected by the Sarbanes-Oxley Act, a European firm that must comply with the Waste Electrical and Electronic Equipment (WEEE) mandate in Europe to return and recycle parts and materials, or a financial institution affected by Basel II.

Reduce Audit Costs

Large U.S. companies now spend millions of dollars on regulatory compliance. Clearly, there are significant efficiency gains to be had by leveraging master-data management to ensure compliance. In fact, by implementing the right controls you can reduce audit and other external costs.

Avoid Fines and Penalties

Other compliance-related expenses are even more damaging than lack of efficiency: the costs that might be reduced through better management of master data. One such opportunity is avoiding the fines and penalties associated with citations for poor compliance. Auditor scrutiny – and thus the chances of being investigated – has increased sharply. Another reality is that investors punish companies that demonstrate poor governance. In the debate over the Sarbanes-Oxley Act, the U.S. Senate found that corporate governance failures have engendered market capitalization losses totaling in the trillions of dollars.

Minimize Dishonest Behavior

In discrete manufacturing, an endless river of data flows into and around the company, and unauthorized data use is an ongoing problem. However, by standardizing and reconciling all manner of information from and about customers, products, employees, and suppliers, master-data management can help you recognize and minimize dishonest internal behavior.

American Standard and SAP NetWeaver® Master Data Management

The following success story demonstrates how SAP customer American Standard uses the SAP NetWeaver® Master Data Management (SAP NetWeaver MDM) component for competitive advantage. American Standard harnessed the power of master-data management to spark innovation, optimize efficiency, and improve supply chain visibility.

The Automated Transmission of Accurate Information Using Industry Standards

Delivering the right information where and when it is needed is a common challenge to every business. However, when your business manufactures hundreds of products and thousands of parts, another challenge emerges – publishing the information at an acceptable cost in terms of time, money, and resources. American Standard faced both of these challenges. It overcame them with SAP NetWeaver MDM and other SAP NetWeaver components.

American Standard is a leading provider of bath and kitchen equipment sold under the American Standard, Porcher, Jado, Crane Plumbing, Fiat, Showerite, Universal-Rundle, Sanymetal, and Eljer brands. The inspiration for MDM at American Standard came with the request from a large retail channel partner for accurate and timely product data feeds for use in its stores, kiosks, and Web site, but especially for the retailer's special-order program. However, the extraordinary scope of American Standard's product offering, together with its multiple manufacturing and sales operations, presented major obstacles to achieving the request.

At that time, Big Hammer, a third-party product-data service, collected and maintained the company's marketing, logistics, and product data. Big Hammer required all suppliers to respond promptly with electronic data exchange (EDI) document download receipts. With all of its faucets, sinks, toilets, fixtures, and integrated bath suites, the company had thousands of SKUs to

document and maintain. To meet the retailer's request for timely data and Big Hammer's requirements for data management, American Standard would have to cleanse and validate a huge amount of data.

What was needed was a robust process that would enable automated transmission of accurate information using industry standards at American Standard. But beyond meeting the retailer's and Big Hammer's requirements, the company realized it had broader considerations and objectives that would have to be built into the data model and system landscape of its MDM solution.

American Standard's master data, which was composed of products, customers, and vendors, drove many critical business processes. These ranged from enterprise resource planning (ERP) and EDI to product catalog publications, business intelligence, and Web sites. The company needed a comprehensive MDM solution to create, manage, and integrate its master data across the enterprise, which meant spanning multiple systems.

American Standard wanted its MDM solution to deliver business value by improving master data consistency and integrity with centralized master data maintenance and workflow and by driving efficient data exchange with all of its retail customers. It also needed to centralize and optimize its print and Web publications, as well as enable future initiatives using service-oriented architecture.

In response to its solution requirements, American Standard built the data model for its MDM solution around the most basic data component – the SKU. One reason it selected SAP NetWeaver MDM was because the solution's product model was already at the SKU level. This enabled American Standard to use the standard extraction protocols to integrate SAP NetWeaver MDM with the SAP® ERP application.

American Standard has completed the first of two phases of the SAP NetWeaver MDM implementation. The first phase enabled the company to participate fully in the retailer's special-order program. In the second phase, American Standard will use SAP NetWeaver MDM as the engine to drive product data syndication to its customers and workflow to its internal and external Web sites. The second phase implementation is significant because it supports the company's most valuable marketing tool – its customer-facing Web site that lists the features, benefits, specifications, and prices of products made by American Standard brands.

To date, the MDM solution at American Standard is returning business value in the form of business benefits every day. These include fewer teams and resources needed to manage the product data, and the data is now demonstrably cleaner and 100% validated – even checked for spelling before it is shared with customers. There is more time now for analysis and less time needed for maintenance thanks to the consolidation of data. Furthermore, because the company can now consoli-

date its master data in one repository supporting multiple languages, it has a powerful tool in coordinating information globally.

To sum up the value delivered to American Standard through MDM, the company now has accurate and timely product and price information at its fingertips, together with an efficient and effective method for publishing this information directly to customers at all levels.

SEARCHING FOR THE TRUTH

THE AGE OF MASTER-DATA MANAGEMENT

Data is the lifeblood of business. Today, globalization, increased customer demand, and technological innovation combine to make a compelling case for implementing and deploying a master-data management solution in your company.

Because your business and product data and its management are crucial to the very existence of your business, the issue of MDM affects virtually everyone in your company and touches all aspects of your business, not just the CIO or IT. In addition, with MDM, the potential for improvement is enormous, because it can improve all business processes, not just one or two.

Any company that deals with large volumes of data used for multiple purposes by multiple organizations can benefit from effective MDM. The list of benefits is long. It includes operational efficiencies, enhanced revenue opportunities, and better insight into business operations. It also includes tighter compliance with regulatory requirements – helping you to avoid fines, internal misbehavior, and the potential for losses in shareholder value. Increased focus on MDM can and almost always does result in quantifiable increases in business value.

Think of the benefits MDM can bring to your company, where reliable, cross-system, enterprise-wide business processes and analytics enable everyone in the organization to have access to the same information and knowledge –

your single and actual version of the truth. With its abilities to consolidate master data and enable the free flow of consistent data across systems and boundaries, MDM offers one of the most promising opportunities for improving business processes and building a decisive competitive advantage available today.

Learn More about MDM from SAP

You can find a great deal more information about master-data management and the SAP solution for it – SAP NetWeaver Master Data Management – at www.sap.com/platform/netweaver/index.epx.

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