



# Pricedex Software

## The Four Pillars of PIM

A white paper on Product Information Management (PIM) for the Automotive Aftermarket, and the four critical categories of process management which comprise a complete and comprehensive technology solution.

## Introduction

With the explosion in the number of makes and models of new cars and trucks on the nation's highways today -- and the corresponding increases in the numbers of service parts – automotive aftermarket manufacturers and parts resellers have never been more challenged to efficiently and profitably manage the millions of pieces of information required to support the distribution, selection and purchase of the right part.

Fortunately, robust software technology from companies like Pricedex is available that allows manufacturers to dramatically reduce their costs in creating, managing and disseminating accurate part pricing and product information to their selling chains.

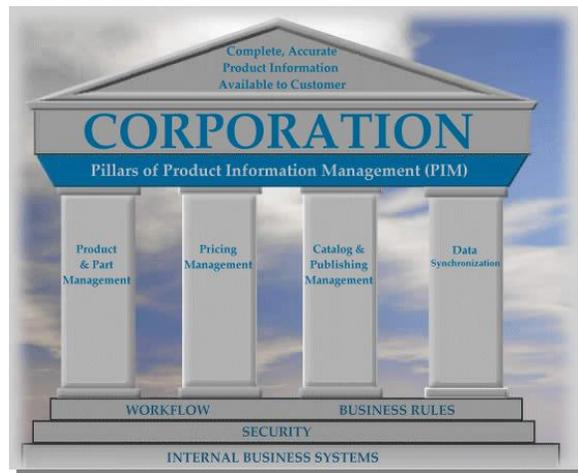
Much more than a simple catalog publishing tool, this technology is broadly referred to as Product Information Management (PIM) software. Comprehensive product information management spans four categories or "pillars" of process management:

- Product & part management
- Pricing management
- Catalog & publishing management
- Data synchronization

No PIM system or set of processes is truly complete without addressing these key pillars - in fact, without addressing each of these key areas, technologies that purport to be Product Information Management solutions are really only, partial, or "point" solutions.

This whitepaper serves as a primer on the "Four Pillars of PIM", and will help readers understand the financial, resource and customer service advantages that can accrue to companies that implement robust PIM solutions.

## The First Pillar – Product and Part Management



In the context of PIM technology, Product and Part Management incorporates all the processes and data related to maintaining products and their associated parts, along with their related

attributes and data to support the product lifecycle, including product and part history and supersessions.

Unlike Engineering and Manufacturing systems (CAD, PLM, etc.), which contain the manufacturing Bill of Materials (BOM), the product management system typically contains the marketing and service BOMs. In addition, it contains myriad additional product support information such as product shipping dimensions and weights, images, and other critical commercial content.

The product and part relationships maintained in a PIM system help companies quickly bring their engineered products to market by facilitating the sharing of information between material suppliers, by maintaining information on product configurations and versions, and by also

the relationships between products and parts, which enables manufacturers and their customers to have accurate information to service products in the field, and to help them both optimize revenue through the sale of service parts. This is the lifeblood for manufacturers focused solely on aftermarket parts and service. A PIM system enables them to perform and share research and analysis on what parts they should be selling in the marketplace, identify gaps in application coverage and changes to equipment assemblies or key components through the establishment of a Competitive Interchange within their product management environment.

Companies that incorporate these strategies can dramatically reduce the time to market for a new product release, or a product supersession. Usually, launch lead time can be



• **Product & Part Management includes:**

- o Supersession management
- o Part & product interchange
- o New product introduction

maintaining source material for after sales service, such as the serviceable part list for a product, service part supersessions and variants, and a number of other attributes.

In addition, a robust PIM system will maintain a full product history, and

reduced to weeks instead of months and in some circumstances even days, because of the elimination of traditional, paper-based processes, and manual workflow. And the information stored here becomes the first supporting pillar in a corporation's selling chain support process.

## The Second Pillar – Pricing Management

Much of the focus in the aftermarket today is on standardizing the means of

is crucial to sales success and profitability.

Pricing is not just simply about having a price in a file or on a Price Sheet, however. Pricing is the one element in a PIM strategy that touches almost every



- Pricing Management includes:
  - o Pricing research & analysis
  - o Contract/rebate management
  - o Publishing & audit controls

communicating product information between trading partners such as Product Information, Application Data, Images and Price Files. One would think this would be a relatively easy thing to do. But consider the following:

Every day in North America, a new product is released by a manufacturer. Product descriptions, images, material safety data sheets are all sent to stores, and inventory is shipped. But the product price is not in the electronic file that is sent, and therefore the stock sits on the shelf without a price, and remains unsold because it is not visible in the Point of Sale system. How can this be?

The most complex element of product information - **Pricing** - is the most overlooked functional feature in most of the major PIM systems today - with the exception of the Pricedex AutoPIM Pro system. And yet, accurate, timely pricing

internal and external process - from initial new product introduction analysis, including researching competitors and sourcing suppliers; to procurement and manufacturing, and the control of changing input costs; to customer relationship management, and the management of contractual arrangements, rebates and promotions.

And it doesn't end there. Publishing systems, the web, e-commerce, and business transaction systems all rely on pricing. Perhaps the complexity of it all is what keeps many of the PIM vendors from focusing on its importance in a PIM solution.

As if to support this, a recent Aberdeen Group study of internal data management issues in the retail sector found that only 11% of retailers are looking at business intelligence data on a near-real time basis; in addition, a full 42% of retailers were still using

spreadsheets to manage their business intelligence data, despite recognizing that such a practice is inefficient.

In a properly planned PIM strategy, leveraging access to customer and sales information while incorporating Pricing Management along with Product and Part Management would eliminate those spreadsheet processes, permit visibility into near real-time business information, and enable informed, accurate business intelligence decisions to be executed.

And as pricing can also affect the corporate financial statements, it is also an element that comes under Sarbanes-Oxley scrutiny, for which compliance can be, without a good PIM system with Pricing Management capability, a costly, time- and resource-consuming venture.

Pricing Management incorporates all the processes, methods, analysis, stages, final data, and history required to support all the variants and conditions by which a price can be calculated for a transaction with a customer. It also includes the means by which that information is conveyed and disseminated through the internal business transaction chain, and the external supply and sell chains.

Being able to leverage part and product information, along with pricing information, within a PIM system enables a company to rapidly execute product strategies and promotions, react to changing market conditions, and interact with its customers with higher

value-added processes which can create disciplined preference to conduct business.

Companies using pricing management systems drive millions of dollars of lost opportunity, margin leakage, customer support and publishing costs out of their operations, and are able to augment revenue by getting the right product, at the right price, to the market at the right time.

A pricing management system, incorporated in a PIM system, enables companies to maintain important auditing histories of part and price changes, and promotions and rebates. It also puts them in a position to distribute knowledge on a near real-time basis throughout their enterprise to improve business decision-making. And, they can even monitor such things as how a customer is performing in sales against its contract pricing or its rebate forecasts, and which of the company's salespeople are optimizing sales and margins, and much more.

In fact, the combined cost savings, margin and revenue growth that some companies report in implementing pricing management more than pays for the entire PIM system implementation and data cleansing effort in under a year. It also eliminates all the spreadsheets the pricers have been managing and keeps the auditors satisfied and companies compliant with legislated compliance requirements.

## The Third Pillar - Cataloging and Publishing Management

If you were to ask most aftermarket sales or marketing executives what their prime issue is with respect to getting product information to their customers, undoubtedly they would say that it's accurate cataloging that is demanding

data, product specifications and Material Safety Data Sheets, as well as images and pricing. A comprehensive PIM system enables companies to manage each of the processes involved in both creating and managing this breadth of product information and materials. Only a few PIM systems, such as the Pricedex AutoPIM Pro system, incorporate all these capabilities and the



### • Catalog & Publishing Management includes:

- o Localization, image & publication management
- o Application cataloging
- o Data normalization/ syndication

most time and resources.

means to publish catalogs.

But the type of cataloging they are talking about - the correlation of parts to vehicle applications, also known as "fitment data" - is only the tip of the iceberg when it comes to Catalog and Publishing Management.

"Publishing Management" refers to all the processes that enable companies to communicate the correct information to their trading partners from their catalogs.

The term "Catalog Management" is often misused because it is too narrowly defined. Actually it is the umbrella term for all electronic processes related to the creation and publishing of catalogs and e-procurement processes.

For example, Customer "A" is entitled to receive a catalog with Product Categories 1, 2 and 3, with US List Pricing; while Customer "B" receives Product Categories 1 through 5, with US List and Wholesale Pricing, and English and Spanish language text. Publishing Management actually facilitates Partner Relationship Management by managing customer profiles and allowing the customization of content and distribution to enhance customer satisfaction.

In the aftermarket, a complete set of catalog information includes fitment

Further, Publishing Management maintains a record of 'how' the information is published to a customer. In the North American aftermarket, it is via a combination of ACES files (for fitment data) and PIES files (for product information, images and pricing). In other markets, or with other customers, the electronic files created may be to a customer-specific format, or to another industry standard. Publishing management takes into account the 'preferences' for a particular customer or customer type, and automates the output of the required content and the publishing format.

Cross-media publishing leverages technology to enable publishing in various media - from hard copy (paper), to a variety of electronic formats. There is usually an enormous return on investment for companies adopting cross-media publishing because it allows them to combine the two separate, parallel processes needed for

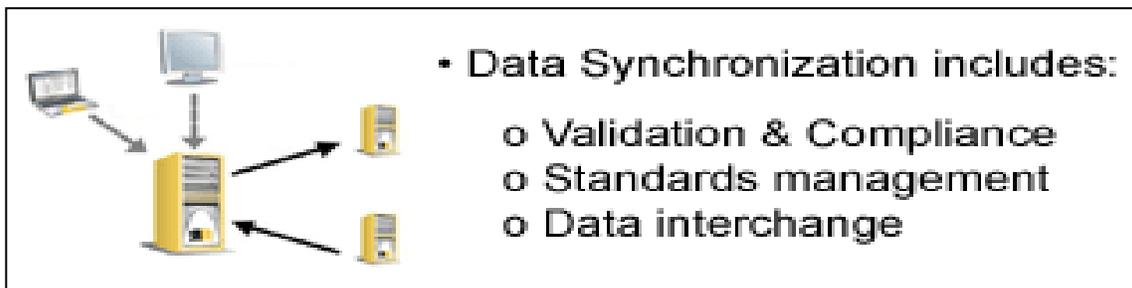
system incorporates strong cross-media publishing capabilities.

Incorporating Catalog and Publishing Management processes into a PIM strategy can easily pay for the total cost of ownership of a PIM system.

A number of companies have reported reductions in publishing costs in excess of 90% with a fully implemented system, and further, have benefited significantly from faster 'time-to-market' with complete product information getting into the hands of their selling chain partners and end customers.

## Data Synchronization – The Fourth Pillar

It is a common misconception that a Product Information Management (PIM) system is simply a central repository of data, enabling companies to aggregate and disseminate product information. Nothing could be further from the truth.



paper publishing and publishing web content to be rolled into a single, simultaneous process. In addition to its extensive publishing and cataloging features, the Pricedex AutoPIM Pro

In fact, if a PIM system is truly to be called a "system", it must not only incorporate data from across the enterprise, but it must also incorporate features that add value to that data, and

then enable this enriched data to be shared internally and externally. This internal and external sharing of information is referred to as "synchronization".

True data synchronization requires a look at the internal requirements to harmonize data, as well as the external requirements to syndicate (i.e., publish) data.

### ***Internal Harmonization***

The best PIM systems have flexible and robust interface tools that enable and expedite the flow of information from and to internal business systems. And, the best of the best have full audit capabilities that allow the tracking of changes while and maintain a full history of those changes. This makes it easier for companies to communicate product changes while maintaining cross references and history of superseded parts to support both internal Customer Service departments and the publishing of catalogs and other information required by customers. And, part history is not the only element a good PIM system tracks - the best ones also harmonize information across products, sales, customers, and prices to provide analytic and reporting tools to improve business decision making processes.

Rather than risk replication of processes and creating duplicate data by simply maintaining a central repository, the best PIM systems facilitate the harmonization of data across the enterprise by using interfaces to

interchange data between business systems. This means that certain data continues to be 'mastered' in the appropriate system (i.e. new part creation in an ERP system), but other processes incorporated in the PIM system allow data to be manipulated and formatted to enrich the base data (i.e. Pricing Information, Service Information, etc.) and feed it back to business and transactional systems.

### ***External Syndication***

The rapid dissemination of information to selling and distribution channels has long been recognized as a critical element to competitive success. What's new is that it's not just speed that matters, but also the quality, accuracy and form of the data. Just as there is a Quality Assurance (QA) process in the release of products, a QA process is required to ensure the quality of product information getting to the sales channel. This has been a big problem in virtually every industry, with incomplete and incorrect data proliferating in catalogs and point of sale systems.

Industry associations have looked at the problem, and have attempted to help their respective sectors by creating standards for the conveyance of product information between trading partners.

In the automotive aftermarket in the NAFTA region, the industry standard is called PIES (Product Information Exchange Standard). The hope is that by providing a data structure in which to convey the information, fewer resources

will be required by everyone involved to manage inbound and outbound data. And, while standards are good and necessary, standards vary among industries, as well as across vertical segments. For example, a tire manufacturer likely has to support at least four standards for these four markets: automotive original equipment and the aftermarket, plus aerospace and industrial equipment.

The best PIM systems make producing product information in multiple and varying standards a relatively simple and straightforward process while incorporating robust QA processes to ensure valid product information is being published and sent to the selling chain. The process is known as Data Validation.

### ***Data Validation and Compliance***

In PIM-speak, Data Validation is simply the adoption of business rules by which to audit and validate that a particular data file meets the specification for the Standard being used, while the commercial content of the data file meets the specification that the trading partners have agreed upon. Data Validation seeks to ensure that a) no mandatory data is missing; b) that certain content meets the requirements of the standard (i.e. common terminology for Units of Measure); c) the correct pricing and other commercial information is being provided to the correct trading partner for whom the file is being produced; and

d) whatever additional specifications related to the particular trading partner are being followed (i.e. the appropriate product lines, image types, etc.).

The best PIM systems can take this one step further - ensuring total external synchronization - by 'version controlling' the data file created and also by facilitating data matching between trading partners.

Data Compliance is simply system reporting that all data validation steps are complete - and a system check has been performed against the business rules - thus providing a system report that the data file complies with the business and trading partner rules in force.

### **Summary**

Companies utilizing PIM technology to manage product information benefit greatly by tying product management processes together with a centralized product information repository. These benefits can yield significant multiples of the original investment for a company, relating to reduced costs to manage product information and lower production costs for product-related publications and support materials, to increased sales revenue and higher profit margins, due to accurate and higher quality product information making its way faster into the sales and distribution chains, and ultimately, into the hands of purchasers making product decisions.

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Reduced costs are not limited to the simple enablement of automated publishing, however. Reduced costs include shipping, handling, carrying and support costs related to remediating erroneous purchases, and providing related customer support and service to effect the remedy.

Increased margins and revenues relate not only to 'time-to-market' matters, but also, to incorporating internal processes to optimize these elements, through gaining visibility into crucial, market-related information, making informed decisions to optimize product margins, and by creating customer preference to do business with you by making it easier to do so with quality product information in formats they can use; particularly, in industry standards or in other standards negotiated between businesses.

And, connected to the internal visibility of product information is the ability to ensure that trading partners can also share in the benefit by being able to ensure that their information matches yours through data synchronization.

PIM systems provide manufacturers, and members of their supply and sell chains, with strategic tools that provide competitive advantage through harmonized, accurate, and timely creation and sharing of application information and commercial content.

The key to this, and where PIM systems differ, is in their ability to provide comprehensive, integrated functionality in each of the 4 key areas of process management – Product Management, Pricing Management, Catalog & Publishing Management, and Data Synchronization.

Technology solutions not covering these four key process areas, or "Four Pillars", will leave process bottlenecks remaining – and thus, are only partial, or point solutions. Pricedex AutoPIM Pro™ is the only commercial, off-the-shelf software available to the automotive aftermarket that addresses and incorporates the Four Pillars of PIM to ensure the rapid dissemination of accurate, complete product information to the outside world.■

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### About Pricedex Software Inc.

We are a leading developer of world-class pricing and product information management (PIM) solutions. Pricedex enables manufacturers to establish, manage and maintain product and part relationships, pricing methodologies, catalog structures and business rules and logic while integrating with back-office, ERP and e-Commerce systems.

Additional whitepapers describing Pricedex solutions and technical architecture are available upon request or by visiting the Pricedex web site.

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