



# Pricedex Software

## Mastering the Automotive Aftermarket Industry Standards

A white paper on how an integrated Master Data Management strategy using Industry Standards can streamline the creation of Product and Vehicle Application Information.

## Introduction

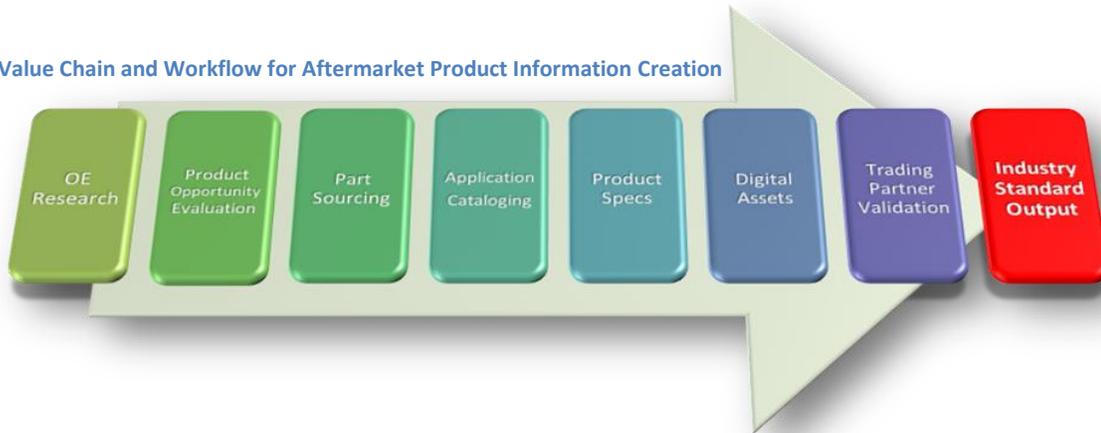
The Automotive Aftermarket, and associated data service suppliers in North America have invested heavily over the last decade in providing a variety of reference data and electronic commerce standards to help manufacturers and resellers streamline the supply- and sell- chains. The technology industry has responded with a number of software tools to assist in the conversion of internal data to market-facing industry standard data,

correction, slowing the time-to-market for product accurate product information, and costing the supply chain millions of dollars in returns and rework.

### **AutoPIM Pro™ - Mastering all the Standards and Integrating Internal Data**

AutoPIM Pro™, the leading Product Information Management application

The Value Chain and Workflow for Aftermarket Product Information Creation



but each of these ‘point solutions’, alone, either solve only one of the ‘data bottlenecks’ in the production of market content, and certainly do not resolve to a Master Data Management and proper Data Governance strategy. Until now, the manual effort to validate and remediate changes in crucial reference data, affecting all aspects of vehicle application data, part data, and trading partner-specific content has been error-prone and time-consuming, resulting in countless hours of review and

software for the Automotive Aftermarket, has been developed by industry experts in collaborative consultation with the Automotive Aftermarket industry. It provides a platform by which all stakeholders in content creation can work collaboratively, integrating industry reference data with internal operating data, to ensure smooth, seamless release of accurate vehicle application data and rich product content.

### OE Research

OE research is the beginning of the process of determining what original equipment parts fit on a vehicle, and how your parts cross-reference, to determine gaps in coverage, and potential product opportunities. In conjunction with our Industry Partner, MOTOR Information Systems, you can now load your OE subscription data directly into AutoPIM Pro with our OE Research Connector, and automatically view your Interchange, compare application coverage, identify gaps, overlaps, supersessions and carry-over/carry-up opportunities.

### Product Opportunity Evaluation

Assessing product opportunity encompasses a number of disciplines, including an assessment of the registered vehicle population (car parc), as well as a certain financial assessment of the marketplace. With our industry partners, IHS and Experian, we can load your car parc data directly into AutoPIM Pro with our VIO (vehicles in operation) Connector, and view the fitment opportunities for your parts. Couple that with tracking competitor and OE Pricing using our Competitive Interchange and quickly extrapolate the market opportunity for your parts.

### Part Sourcing

Part Sourcing is the process of identifying the Supplier(s) or the Plant(s) which will provision parts, at what cost, with what packaging and what lead-time. AutoPIM Pro has an optional quotation management module which enables true comparison of suppliers or

competing plants and lead times, landed costs, and packaging costs.

### Application Cataloging

Application Cataloging is the process of preparing vehicle fitment data, or the part-to-vehicle relationship, for the Application Catalog and electronic output files required by the aftermarket industry.

Cataloging in North America and new emerging markets relies on these industry tables, and output formats. AutoPIM Pro™ products for the automotive aftermarket have industry association connectors to load these tables into its master vehicle tables, and produce the enriched catalog content in the ACES format. Where AutoPIM Pro™ differentiates, however, is that it uses a 'sandbox' approach to loading these critical tables, giving users a view of the impact to their cataloging work of updates to the industry tables, before committing the updates to the master vehicle tables, thus mitigating the possibility of coverage loss due to an error in the industry table updates. Further, the AutoPIM Pro™ system maintains an Audit Trail of all user and/or system changes to the Application Tables, so that errors can be tracked and reversed, if necessary.

### Product Specifications

The characteristics of your products, from critical logistic and transactional information, weights and measures, to other 'form-fit-function' performance



#### Autocare Vehicle Configuration Database

- Contains coded tables depicting vehicles and their components, and which configurations of vehicles are valid
- Industry subscription database



#### Autocare Product Classification Database

- Contains coded tables depicting a Part Type Taxonomy and a table of valid fitment positions for the particular part
- Industry public domain database



#### Autocare Qualifier Database

- Contains coded tables depicting 'variants, exclusions, or specific fitment notes relative to a part-to-vehicle (application) record
- Industry public domain database



#### Autocare Aftermarket Catalog Exchange Standard

- The industry Electronic Commerce Standard for conveying vehicle fitment data
- An XML format which can also contain digital assets related to the application

attributes and market-facing 'rich content', is mission-critical information

required by your customers to make an installation or purchase recommendation. The automotive aftermarket industry in North America supports a series of standards and best practices to assist in the creation of Product Specifications, but the use and management of those can become unwieldy, at best, without a systematized approach to the management of these large reference tables. AutoPIM Pro™ products for the automotive aftermarket have industry connectors for the loading, maintenance and use of these numerous tables, while also providing output formats that comply with the Autocare Product

Information Exchange Standard (PIES), and optional output formats to support other industry standards, such as GS1, Edgenet, AWDA, and means to support proprietary output formats used by specific trading entities.



#### Autocare Brand Table

- Like a DUNS code, the Autocare Brand Table is a registry of Codes which define Brands, Sub-Brands, and the Companies which own the brand. This information is critical and required to convey information about your company and its products.
- Industry public domain database



#### Autocare Product Classification Database

- The PCdb is a series of coded tables defining a Part Type Taxonomy by which to categorize your products. AutoPIM Pro products provide you with a means to cross reference your internal product categories with this industry standard.
- Industry public domain database



#### Autocare Product Attribute Database

- Contains definitions of the descriptive attributes required to define the 'form-fit-function' and performance characteristics of over 12,000 products sold in the aftermarket. AutoPIM Pro products have an industry connector to load and assign the correct attributes and any related lookup tables to your PCdb-coded products.
- Industry subscription database.



#### Autocare Product Information Exchange Standard

- The industry Electronic Commerce Standard for conveying product information. Comes replete with over 1250 coded lookup values to support weights, measures, units of measure, market copy definitions, file type definitions and much more. AutoPIM Pro products have an industry connector to load and maintain all the external reference tables.
- Industry public domain standard which also contains an XML format for electronic exchange of the data.

### Digital Asset Management

The next step in the compilation of replete, rich content is the creation of Digital Assets for collateral support of your products. Digital Assets are more than simply images; they are anything that exists in a binary format and includes a right to use the content. Technical Brochures, Line Drawings, 3-D Images, Videos and other relevant digital files are all additional examples of Digital Assets beyond simple product images.

Digital Asset Management is the process of by which digital content created for the support of products is related to and linked to products and application records; and by which the digital assets are repurposed, resized

and renamed to produce a consistent standardized output.

The North American Automotive Aftermarket industry has established a series of 'Best Practices' by which to identify and produce digital assets for the conveyance and consumption of same in both the Aftermarket Catalog Exchange Standard (ACES) and the Product Information Exchange Standard (PIES). AutoPIM Pro™ products leverage these best practices and contain powerful Digital Asset Management utilities which will identify and code a specific type of digital asset and its orientation, file characteristics and other metadata; and rename and resize/repurpose the digital assets and associate them with products. Like all

other aspects of the AutoPIM Pro™ products, change management is handled through automated versioning and archiving of updated digital asset files.

### Trading Partner Validation

The final step in the creation of electronic commerce files to support the aftermarket is to identify which Trading Partners receive which content, with what naming conventions, and in what manner. This can be a highly time-consuming process, with multiple review and remediation stages between the sender of the data and its recipients. Notwithstanding the fact that there are a robust set of Industry Standards by which to convey product and vehicle application information, every consumer of the data has its own methods for the interpretation of the data, which, by virtue of the sheer volume of product information they are receiving and converging (anywhere from 100 to 1000 different product lines), it is necessary to ensure some standardization of what they are receiving from a myriad of suppliers.

Resellers themselves have a number of variations on their data requirements which support a number of their internal automated processes. These can include requiring additional custom attributes on products to help optimize the resellers' catalog lookup system; regional pricing variants for their various stores; specific naming and repurposing conventions for digital assets; and even modification of the vendor part numbers so they can be handled in the reseller point-of-sale systems.

AutoPIM Pro™ products contain a special set of utilities to profile each trading partner, and its variety of special requirements; and applies these rules when the output files are created, performing a validation of each record prior to its publication. The result? A correct and valid customer file, each time, every time. And records which do not meet validation criteria are logged and assembled in a list so users can concentrate their activities on fixing only what needs to be fixed.

### Summary

The thought, time, effort and investment that has gone on to develop a holistic set of industry standards for the crucial reference data needed by practitioners to research product opportunities and speed the time-to-market of new products; while also ensuring a complete set of standardized electronic commerce conveyance standards for vehicle application and lookup data, images, and both technical and market-facing product content to facilitate communication between trading partners, is an accomplishment achieved in only a few other industries. However, the benefit and efficiencies available to manufacturers and consumers of the data has only begun to scratch the surface.

Implementing a PIM strategy and comprehensive, end-to-end system which leverages all the industry standards, reference tables, best practices and more; while maintaining a data governance structure which respects all the sources of mastered data and can isolate aberrations, errors

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and omissions, will yield ongoing multiples of the initial investment in time and effort of 'getting the house in order'. Pricedex AutoPIM Pro™ PIM solutions are designed specifically for the aftermarket, and leverage all industry standards and practices in a robust, workflow-controlled collaborative

environment. And the Pricedex subject matter experts will help you optimize that effort by bringing a thoroughly documented aftermarket process to practice.

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### About Pricedex Software Inc.

Pricedex Software Inc. is the automotive aftermarket's leading developer of world-class pricing and product information management (PIM) solutions. Pricedex software 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.

A wide portfolio of globally deployed customers use Pricedex off-the-shelf **software to improve profitability, efficiency**, accuracy and overall customer satisfaction.

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