



# **InQuera Central Repository (ICR)**

**White Paper**



**...containing innovatively structured  
manufacturer information on  
leading MRO products for unlimited  
catalog possibilities...**



## InQuera: A Name Synonymous with Print and Virtual Catalogs

Often in today's market, a catalog with product information may be the only point of contact between a customer and a vendor. Therefore, catalog content, design, presentation, and availability are critical to creating brand recognition and communicating product information. InQuera firmly believes that the secret to successful catalogs lies in the foundation and integrity of the infrastructure that contains the product information.

For over five years, InQuera, (the former content division of recent SAP® acquisition, A2i, Inc.), has systematically been selecting, harvesting, and processing product data of major MRO (Maintenance, Repairs, and Operations) manufacturers. Professional teams of seasoned product experts combine field experience, know-how, and skillful technology to transform manufacturer product data, from any data source, type, size, format, or layout, into the intelligent product content InQuera uses for catalog assembly.

ICR (InQuera Central Repository) is the single, central, database-driven repository that contains InQuera's intelligent product content, which has been aggregated from multiple manufacturers. Expressly structured for manipulation into automated, cross-media, virtual and print catalogs, ICR's unique data storage of product content, and output systems, eliminate time-consuming, tedious chores previously associated with product searching, and catalog creation and production. ICR continues to grow at a steady monthly rate and currently holds over 4 million distinct products with robust content, as well as 12 billion configurable products.

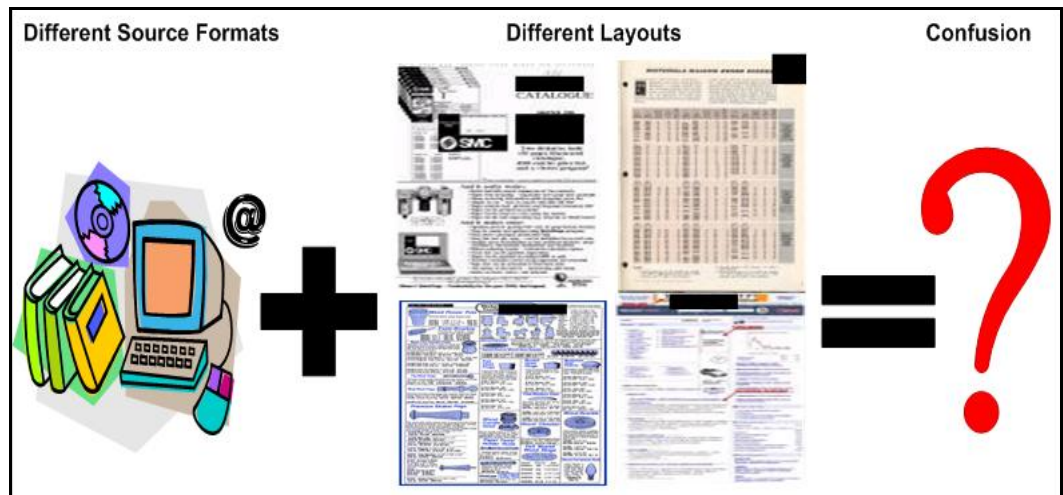
The future lies in InQuera's innovative concept of intelligent product content, which has been technologically translated into the cornerstone of the supply chain. Both external buyers and internal acquisition departments can focus on the product content itself, thanks to ICR's universal content format and layout, as well as an easy-to-use browser interface for virtual catalogs in the Internet marketplace. Guesswork, impractical evaluations, and missing information belong to the past. ICR allows you to do your job well, with no detours or distractions.

### It's a Product Jungle Out There

All too often, catalogs present product information that requires deciphering or processing, forcing the focus away from the data itself. Frustrated customers need to pour costly resources into ancillary tasks before being able to review or compare the product information and arrive at a procurement decision. Therefore, it comes as no surprise that much of the currently available catalog information is neither cost nor time effective. Several of the more common reasons include:

- ***Catalogs displayed in diverse formats***, such as CDs, printed copies, or PDF (Portable Document Format) documents require either a very large workspace for simultaneous on-the-fly review, or extracting and inserting the data in an internal system.
- ***Sources that are published at different times*** make it difficult to keep track of incoming data.

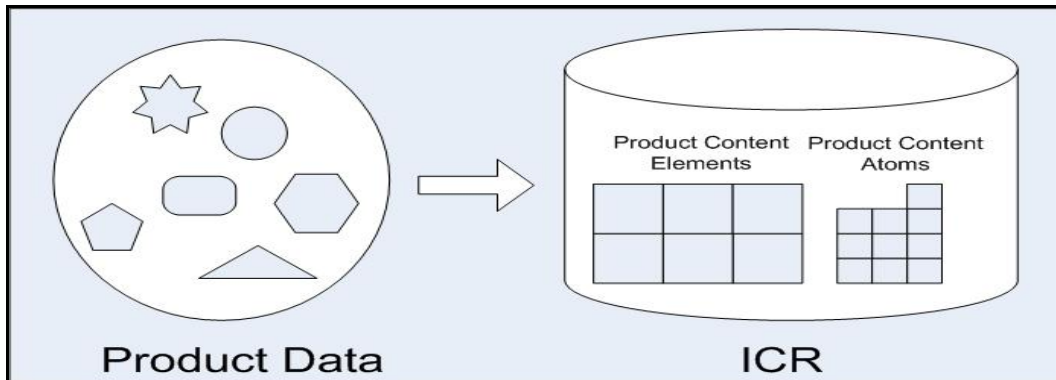
- **Differently-structured data in dissimilar layouts** makes product comparison of multiple data sources cumbersome and nigh impossible. Data may appear in headers and margins, in tables, as part of textual content, on different pages, and as notes.
- **Data clumps may mix several types of data** in a single grouping, e.g., text that includes a product description, some attributes and their values, in addition to tests and their results.
- **Identical products sometimes appear to be different** as a result of identification problems, especially due to confusing identifiers such as part numbers, misleading names, and identical data disguised as being dissimilar.
- **Similar products perhaps appear to be dissimilar** because of jumbled or jargonized information. Each data source speaks in a different lingo and sometimes one can't distinguish the wheat from the chaff.
- **Product relationships may be hard to locate**, appearing sometimes textual, as a note, or even on another page. It is not always clear which parts are related and what the relationships are.
- **Inability to find products due to insufficient customer pre- knowledge** creates a professional vacuum, and echoes the old adage "less is more," meaning that less information equals more time-consuming guesswork and footwork for the user.
- **Inadequate search functionality for online catalogs** can be frustratingly hard to navigate, and lead to fruitless results. Improperly organized, ill-defined traditional databases are inadequate, since the user has to guess at the appropriate search terms.
- **Inept or incomplete product configurations** generate limited options with partial product data.
- **Missing information** is usually not missing; it simply doesn't appear in every data source. This increases the need to examine multiple data sources.



In brief, despite modern technology, locating and comparing products in a cross-media and cross-manufacturer environment is generally no simple task — though it should and can be.

## Not All Catalog Content Is Created Equal

The ICR infrastructure is instrumental in transforming product data into product content; several processes are applied to incoming data, using a sequence of simple, discrete steps. After processing, the content is structured and stored as raw, modular, building material ready to be used for catalog construction.

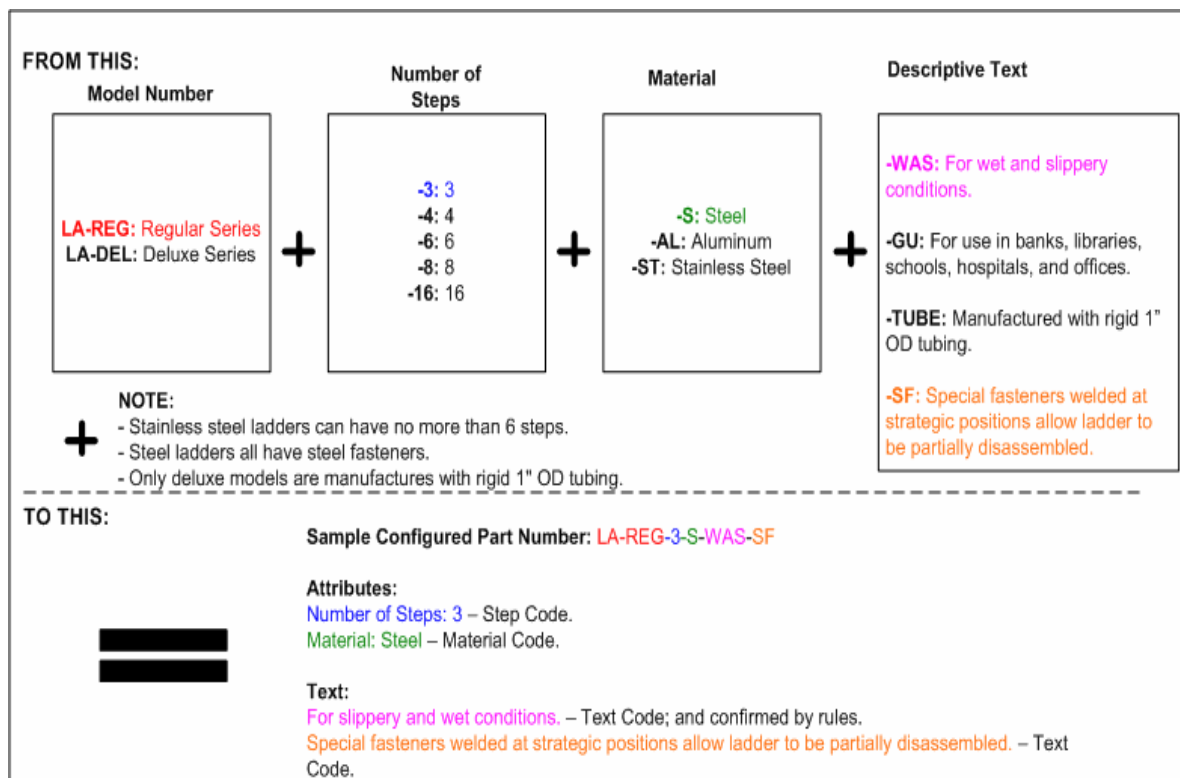


Most important to keep in mind is that, during all processing and subsequent output stages, only the data's presentation changes and not its original essence. Some of the processes that incoming product data undergoes include:

- **Validation:** Automated checking to determine whether the data is accurate, complete, and meets InQuera's rigid, specified criteria.
- **Cleansing:** Identifies and eliminates duplicate part numbers that contain similar-looking data.
- **Granulation:** Dismantles and granulates data into pre-defined mini information blocks, known as product content elements, which are further broken down into micro blocks, known as element atoms. All blocks, i.e., the elements and atoms, are grouped according to their content, and may include attributes, texts, images, PDF (Portable Document File) reference documents, and/or drawings.
- **Normalization:** Standardizes all incoming data into universal and comparable terminology, as well as common units of measure. In this way, content can be aligned at an equal level of catalog presentation, thus eliminating the "Tower-of-Babel" information-comparison syndrome where each catalog speaks in a different language.

<p>47 inches 47" 47 in Forty-seven inches</p>	<p>USDA Rated H-1. Rated H-1 by USDA. The USDA has rated this product H-1 in keeping with government restrictions.</p>
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- **Enrichment:** Searches multiple data sources for missing information that does not appear in all sources, such as attributes or attribute values.
- **Product Configuration:** ICR combines its unique information building-block system to configure 12 billion products and support complex product configurations. The automatically-run rule options guard against illegal configurations and eliminate configuration errors. ICR does all the work.



## It's Not Only What You Have, But How You Use It

When processing is complete, the data has metamorphosed into the intelligent product content blocks from which catalogs are assembled. The concept of assembling content blocks allows more room for flexible and automated content manipulation than catalog creation usually allows. All blocks are created only once, and can be used simultaneously in an unlimited amount of products and catalogs. Therefore, it is not necessary to "start from scratch" each time a customized catalog or various outputs are required.

Now that ICR has completed all the tasks related to gathering, filling in, and organizing product information, the next step is to search for and compare prospective products. One of ICR's more significant features is the advance product search functionality for virtual catalogs.

### Search for products... and compare them!

- InQuera's behind-the-scenes hierarchical product taxonomy, based on a set of common, category-specific attributes, is what makes it possible to quickly locate a few specific products or categories of products.
- Incremental, iterative search criteria selections can be made simultaneously from among pick lists in different dimensions (such as category, manufacturer, attributes, and keyword), and in any order.
- Because parameters are selected from populated pick lists, pre-knowledge about products is not required and every search produces results. Intermediate search results are immediately updated and always displayed after each selection, providing an excellent level of control and real-time feedback results.

At some point in a product search, the need to compare multiple products will most certainly arise. InQuera's unique Comparison View feature displays product information in a side-by-side, comparison matrix table that automatically updates to include information for currently selected products for display. This feature is also useful for viewing a single-column content summary for a single product.

All units of measure are standardized, and all information is normalized intelligent product content. The cross-manufacturer information allows the user to search for a product and view results for all manufacturers that meet the search criteria. The figure below shows truncated, sample search results of the search criteria end mills with a square end shape. Note that the color-coded content makes comparison easier, appearing pink for different values, blue for missing values, and yellow for identical values.

<b>Manufacturer</b>	Widgets, Etc.	Morrone's Tools	WT End Mills Co.	CuttingMach, Inc.
<b>Part Number</b>	WE-123	MOR-9956	WT-AT-455	65-47-58A
<b>Name</b>	Series 1 End Mill	"D" HSS End Mill	AA Carbide-Tipped End Mill	TheBest™ End Mill
<b>Applicable Materials</b>	Non-Ferrous Metal    Soft	Most Metals	Most Metals	Steel; Titanium
<b>Cutting Diameter</b>	1/4 in	3/8 in	1/4 in	3/8 in
<b>End shape</b>	Square	Square	Square	Square
<b>Features</b>	35° helix.	High helix angle.		High rigidity.
<b>Warranty</b>	6-month warranty    limited	One-year replacement warranty	Lifetime guarantee	6-month limited warranty

**Additional Special Features:** ICR's uniquely flexible infrastructure allows features such as noting different kinds of relationships between manufacturer/cross-manufacturer products for sets/parts, kits/parts, accessories, and replacement parts; applying different prices to the same products, for different regions; and grouping products on the basis of one or more shared content elements.

Last but not least, ICR offers a wide range of on-the-fly output possibilities for virtual or print catalogs:

- Web catalog, with licensing rights to all or part of ICR.
- Hosted Web catalog, tailored to customer needs.
- DTP (Desk Top Publishing) catalog layouts.
- Syndicated product content for customization, exported as an MDB, TXT, or XLS file.
- Price list or extended price list, which may contain descriptive information and/or images.

## **Vive La Difference!**

InQuera has created ICR to provide automatic and dynamic interchange of normalized and comparable MRO product content between vendors and customers. ICR contains the intelligent content of 4 million distinct products with robust content, as well as 12 billion configurable products.

Until this kind of technology surfaced, it was often impossible to compare products from different vendors without first performing time-consuming calculations and preliminary set up of vendor sources for review. The unique, behind-the-scenes search functionality does not require pre-knowledge of the product, and displays product sets that would have been otherwise impossible to locate for comparison;. Indeed, on the surface some may appear to have no common denominator.

ICR is customizable to customer needs, and meets diverse output challenges, both as exported files and as virtual or print catalogs. Using the uniform, modular blocks of intelligent product content that comprises ICR, catalogs can be assembled effortlessly and quickly. ICR removes the focus from outdated and cumbersome manual catalog-related tasks, and places it where it belongs -on the product content.

### **One ICR — unlimited possibilities**