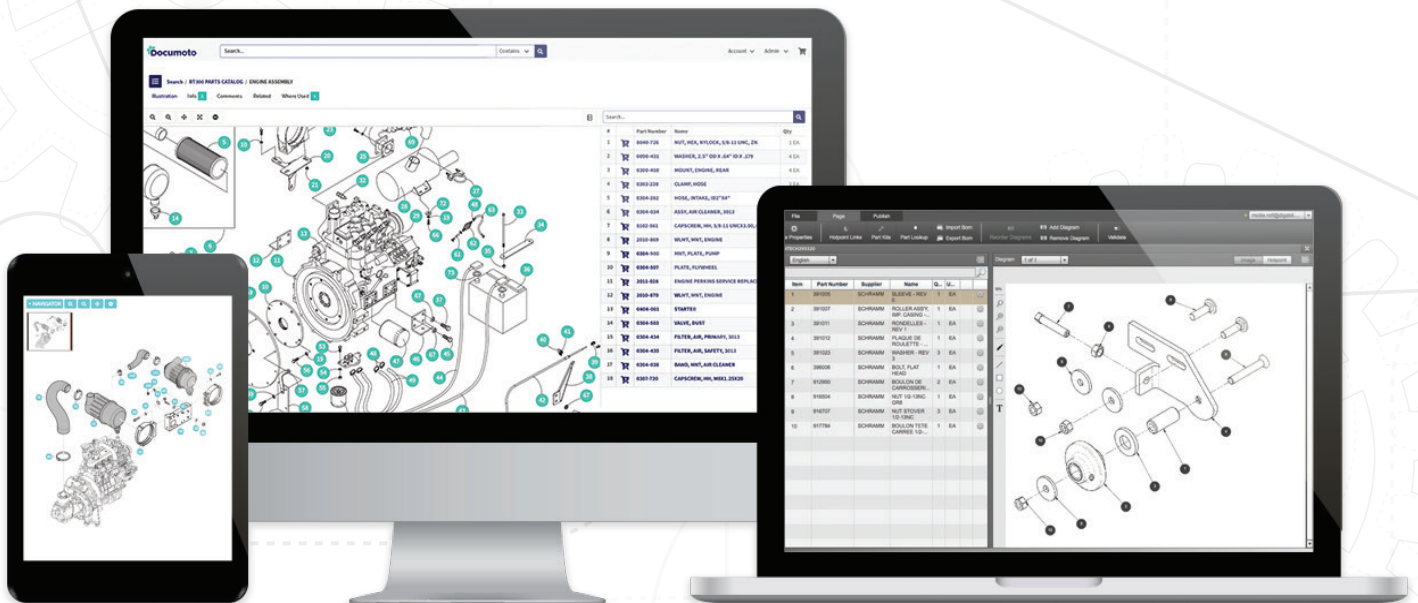


Creating Exceptional Illustrated Parts Catalogs: Dynamic vs Desktop



Executive Summary

Illustrated parts catalogs are critical elements for sales and customer support for many Original Equipment Manufacturers (OEMs), but creating these documents with traditional desktop publishing applications can be a time-consuming process.



Parts catalog publishers—A typical workflow looks like this: gather bills of materials (BOMs) and part drawings exported from engineering, and then reformat this information for print using desktop publishing tools. This computerized method is viewed as a vast improvement in efficiency and quality, compared to the previous practice of physically cutting out illustrations, pasting them on a layout board, and taking a photo to turn into a printing plate.

Just as that physical layout and design process sounds antiquated now, we have entered an age in which desktop layout tools are being replaced by more productive tools and methods for certain types of publications. Because illustrated parts catalogs rely on detailed graphics alongside complex tabular data, publishing from a relational database gives technical writers a more efficient way to standardize formatting, reuse content and maintain information across documents.

This white paper offers an introduction to dynamic database publishing as an alternative to traditional desktop publishing for the creation of parts catalogs and explains the benefits and advantages of this modern approach to optimizing publishing productivity.

How Is Traditional Desktop Publishing Impacting Your Productivity?

Desktop publishing tools like FrameMaker and InDesign provide control over page layout and design, allowing OEMs to self-publish service manuals and parts catalogs. Finalized catalogs can be exported as a PDF and then distributed electronically, as well as in hard copy form.

Although desktop publishing tools are easy to use, they are not industry-specific. For manufacturers producing technical content, these tools often require labor-intensive conversion processes to ensure data and graphics are accurately presented.

There are three key limitations to traditional publishing.

Authoring parts catalogs using traditional desktop publishing tools can be a slow and tedious process due to three key limitations:

1. Manual formatting

While desktop publishing tools typically offer a vast array of options for layout design and element styling, technical writers waste almost four hours every week reformatting information from multiple sources into one document.¹ When building an illustrated parts catalog, there are numerous formatting tasks that must be completed manually. These often include maintaining consistent table styles, customizing template headers for specific page ranges, setting up an error-free table of contents, and adjusting illustrations that are exported from engineering CAD files.

2. Recreating existing content

The publishing process slows to a crawl when content must be recreated for page layout. Individual books created with desktop publishing tools are filled with static information that is frequently copied and pasted rather than linked to the

1. IDC, Information Worker Survey, June 2012.

source data. Whenever existing content can't be found amidst hundreds of previously published parts catalogs, authors recreate the information. According to IDC, information workers spend an average of two hours per week recreating content.²

Sometimes technical writers go as far as retyping parts lists and creating PDF images to place individually on pages. Not only does rewriting content increase the time and cost required to publish a parts catalog, it also generates inconsistencies between the original information and the recreated content. This leads to even greater difficulties when updates and changes need to be reflected across published parts catalogs.

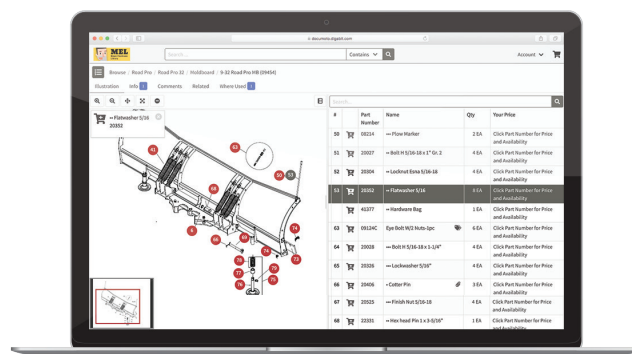
3. Duplicating part updates

As new equipment is manufactured and current models are updated, parts undergo continual changes and improvements. Because aftermarket service and parts orders are dependent on accurate parts information, there's an overwhelming need for technical writers to update parts and page content across the entire library of technical documentation. Unfortunately, it's nearly impossible to keep up when a standard catalog contains several thousand parts, and one part may be shared amongst dozens of product models and their respective parts books.

According to IDC, publishers waste nearly six hours every week formatting information and recreating content.²

When desktop publishing tools are used, these revisions require technical writers to manually search and update repeated content in multiple parts of multiple documents. Making a single part number or page revision could take weeks searching through books to edit static page content. Even if pages are stored as individual files on a drive, placing these updated pages into relative books and then outputting the books to new PDFs is painstaking.

These inefficiencies in desktop publishing tools dramatically impact the productivity of OEM publishing groups. In 2012,



IDC reported that “information workers spend 11.2 hours a week dealing with challenges related to document creation and management. At least 6.0 hours of this is wasted time.”²

While desktop publishing tools are appropriate for some documents, the redundant tasks involved in the development of parts catalogs require a more effective, systematic solution.

What Is Database Publishing?

The term database publishing refers to the automated production of documents by using data stored in databases to dynamically generate documents. “Dynamic,” in this case, means that documents are created in real time using the current contents of the database. Typically, database publishing applications aggregate content from multiple sources and organize this data for publication to a variety of different formats, from printable PDFs to web-ready XML (Extensible Markup Language). Structured XML can be used to display product info in browser-based interfaces, mobile apps, or other applications. This flexibility allows parts data to be presented where it is most needed, in a format appropriate for the user's device.

A relational database is the backbone of most database publishing systems. By storing information in tables, relational databases can filter and sort through data, making information instantly accessible. With a relational database, completely new tables can be built from information in existing tables. In such a way, relational databases amplify the opportunity for content reuse and ensure the accuracy of information.

2. IDC, “Bridging the Information Worker Productivity Gap: New Challenges and Opportunities for IT,” 2012.

Similarities to Desktop Publishing

There are several common characteristics between desktop publishing and database publishing, most notably in the user interface and available editing tools.

As with desktop publishing, database publishing uses templates to maintain consistency across all documents. Headers and footers can be created to meet branding standards and relay specific page or model information. Familiar shortcuts like copy, paste, drag and drop are also available to edit and revise each parts page. These similarities allow for an easy transition from traditional desktop publishing tools to an efficient database publishing approach.

Differences to Desktop Publishing

The noteworthy difference between desktop publishing and database publishing is that every part and page created is stored in a dynamic relational database. This means that whatever goes into the database is immediately available for reuse as parts, pages, chapters, or full books. It also means that changes can be made across all relevant pages, chapters and catalogs in a matter of seconds.

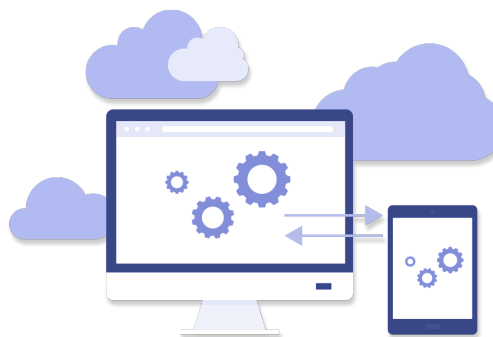
Database publishing replaces manual formatting with an automated, “behind the scenes” approach, based on the preferences the technical writer previously defined. There’s also the added benefit of outputting content to multiple formats including standard PDF and XML formats, like those used by the SmartEquip Network™. Some database publishing solutions also have the ability to make interactive content available online to support aftermarket sales and service activities.

Why Should Your Organization Consider a Database-Driven Approach to Publishing?

A well-implemented database publishing system can effectively automate the creation of parts catalogs and deliver consistently formatted documentation in an accelerated time frame.

Maximize reuse of content

Much of the information presented in parts catalogs is redundant (i.e., identical parts and assemblies used to make different models), often buried so deep in the documents that it is difficult to discover all of the repeated content. Database publishing can reduce or eliminate the labor involved in content recreation and duplication by making parts pages and information searchable and reusable. Existing content can quickly be pulled from the database to dynamically build new documents. By reusing content instead of recreating it, technical writers can focus on improving the quality of the publication rather than on finding and replicating existing information.



Improve consistency across all documents

Parts catalogs created using a database publishing tool follow templates to ensure the layout remains the same across all pages, chapters or books. Page headers and footers are predefined based on brand guidelines. A table of contents is generated programmatically by the database publishing tool. These shortcuts not only improve the consistency of parts catalog layouts but also help technical writers reduce time and effort expended on manual formatting.

Make updates instantaneously

Authoring in a relational database makes revisions simple, yet far reaching. Users can edit page diagrams, change part descriptions or supersede part numbers just as easily as in a desktop application. However, after saving that change immediately appears in all books where the revised part or page resides. Any page, chapter or complete book printed from the database will include up-to-date information. Parts

information can also be uploaded in bulk for major updates, one more time-saving benefit that eliminates hours of data entry. These features make database publishing the most efficient way to maintain accurate and user-ready parts catalogs.



Automating repetitive steps and eliminating those that waste time will increase information worker productivity and customer service and potentially save an organization millions of dollars.”

- IDC, “The Information Advantage: Information Access in Tomorrow’s Enterprise,” 2009

Is Database Publishing A Good Fit?

Generally speaking, manufacturers will reap a high return on investment from transitioning to database publishing if any one of the following applies to their publishing process:

Frequently update part information

Because of time constraints, most organizations update parts catalogs on a quarterly basis, at best. This is common because, in a desktop publishing environment, technical writers must search within documents and across servers whenever there is a change to a part or assembly. By implementing a database publishing solution, updates and changes to parts can be reflected within a matter of seconds across all instances and all documents, so that parts catalogs are never outdated. For manufacturers who continuously improve machine parts and components, and revise or supersede part numbers, database publishing is the only reasonable method for keeping parts books relevant and current.

Follow a standard document structure

Maintaining a consistent format and style for all parts catalogs is crucial, allowing dealers and customers to easily read and

understand the content. Since desktop publishing tools offer unlimited freedom to change the style and structure of every document created, they invite publishers to deviate from a consistent structure. The automated template structure inherent in database publishing solutions keeps parts catalogs in the same format every time, and ensures consistency in branding as well.

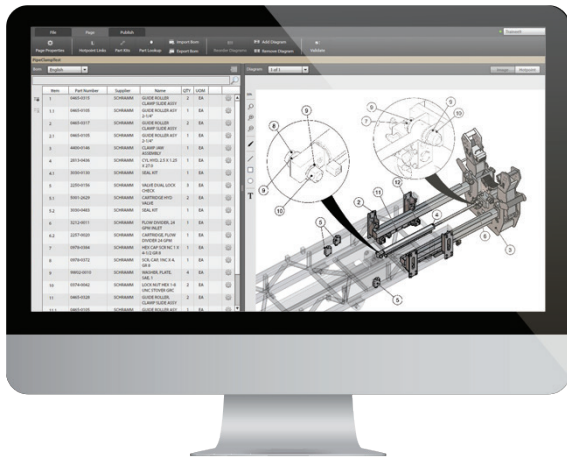
Produce a large volume of parts catalogs

Long-time manufacturers may have hundreds of current and legacy product models for which they must provide aftermarket support and service. Creating and maintaining such a large volume of technical content—especially when based on decades-old source documents—with traditional desktop publishing software magnifies the challenges of creating consistent formatting, updating parts and assemblies, re-purposing existing content, and disseminating content in the most useful format. The more parts catalogs an organization creates, the more time and money it will save by storing parts and product information in a relational database.

Account for configurable, custom products

Manufacturers of products with multiple user options see a great demand for personalized parts catalogs with pertinent information. Some heavy equipment manufacturers exclusively build massive, custom-designed machines that demand a unique parts book for each unit made. With traditional desktop publishing tools, technical writers are forced to either publish longer parts catalogs that contain irrelevant parts and assemblies, or embark on the time-consuming process of tailoring a one-off document for every product configuration. Because database publishing makes it easy to reuse content, custom parts catalogs can be crafted with very little additional labor. This feature will continue to gain in importance with the expanding capabilities of large-scale product customization. Furthermore, maintaining a larger number of parts catalogs inside the relational database requires little or no extra effort.

OEMs must carefully evaluate whether or not this technology will solve the needs of their publishing team.



What Makes **Documoto** the Ideal Publishing Solution?

Documoto is a cloud-based publishing solution that simplifies the creation and maintenance of parts catalogs. The Documoto approach breaks down the parts catalog publishing process into its fundamental components – parts, pages, chapters and books. Every data element related to a part, assembly, group or machine is stored in a relational database. Content is easily found, updated and reused. Technical writers can assemble these data components in different combinations, reuse the same components in multiple publications, and update all instances of a component with just a few clicks.

This functionality eliminates time-consuming, repetitive tasks so that parts catalogs can be delivered more quickly and at a lower cost. Arctic Cat, a globally distributed manufacturer of snowmobiles and all-terrain vehicles, chose Documoto for their parts catalog publishing needs. After the switch, the technical publication team reported a significant reduction in time spent authoring parts catalogs: “We are now able to create a parts book using Documoto in three hours, where before it took eight to sixteen hours with our desktop tools.”

Easy for non-experts to use

Documoto features a user-friendly, intuitive interface that mirrors the functions of common word processing and desktop publishing tools. With toolbars, artboards, icons, and the option to copy and paste or drag and drop

content, Documoto provides a familiar experience for technical writers. Jerry Barr, a Publisher with Federal Signal Corporation, Environmental Solution Group, affirms that “Documoto is easy to learn and use.... Projects that took me days with previous systems have been cut nearly in half, and I’m still new at this.”

Unlike InDesign and other desktop tools which require comprehensive knowledge and experience to use successfully, Documoto can be learned in a matter of hours. In addition to online support documentation and videos, Documoto offers publisher-focused training that lets technical writers start producing high quality catalogs right away.



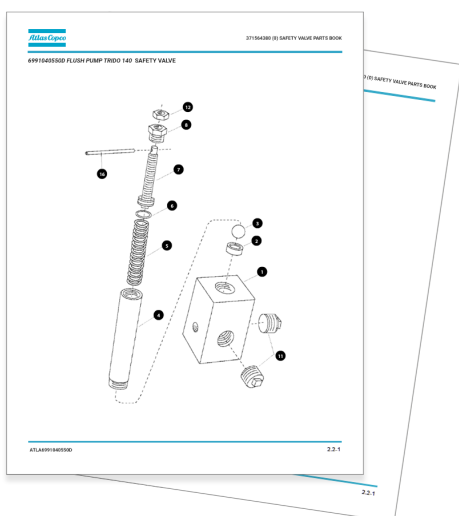
Documoto’s publishing tools are easy to learn and use... Projects that took me days in previous systems have been **cut nearly in half**, and I’m still new at this.”

**- Jerry Barr, Publisher at
Federal Signal Corporation**

Automate part updates across all documents

Since Documoto was designed specifically for manufacturers, it handles changes to parts and assemblies much more efficiently than other publishing tools. Publishers need no longer dread receiving a stack of engineering change orders (ECOs). Superseded parts information is easily entered into the system, and in just a few seconds, any page with a reference to that part will be automatically updated. The key here, as Barr points out, is that “Documoto provides a way to make updates and changes without having to edit an entire parts book.”

These automatic updates don’t require any “Find and Replace” tools or repeated searches – they can be made globally across all documents or limited to certain instances. The relational database backing Documoto keeps track of change references so that old parts information and part numbers can still be searched and found with ease.



Generate structure and formatting programmatically

Once technical writers define page layout and style preferences, Documoto generates a master template to maintain consistent character, paragraph and table styles for all parts catalogs.

Headers and footers on each page can include company logos, contact information, and page numbers as well as particular information like serial or model numbers and assembly or chapter titles pulled directly from the database. The system automatically produces a table of contents and parts index for every parts book.

This automated approach eliminates manual involvement in formatting parts catalogs, freeing technical publishing staff from redundant tasks.

Allow for reuse of content, parts and assemblies

Equipment manufacturers often use identical parts in the production of a number of different models, which in the past required manual insertion of the same source material into each model's parts catalog. Thanks to its relational database and component-based authoring approach, Documoto enables publishers to create and reuse the same data, text and illustrations in multiple publications. Information can come from a variety of sources: bills of materials (BOMs), CAD drawings, and enterprise systems such as ERP are a

few common examples. Migrate this data into Documoto's database once and then use in any page, chapter or book, as many times as needed.

While other database publishing solutions allow for similar content reuse, Documoto goes a step further with state-of-the-art search capabilities. Technical writers using traditional desktop tools will generally recreate content if the existing content can't be found. With Documoto, previously entered data is easily located through filters and other advanced search options, ensuring that existing parts, pages and other components can always be reused rather than recreated.

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We are now able to create a parts book using Docustudio in **3 hours**, where before it took **eight to sixteen hours** with our desktop tools."

- Rod Larson, Arctic Cat
Parts & Pricing Manager

Enhance collaboration efforts

Documoto stores published parts pages and books within a private web library so that the entire publishing team can review, modify and collaborate on each other's documents. Similar to a shared hard drive, this library creates a central hub for existing content.

However, Documoto packs in several powerful collaboration tools that shared drives don't provide. The commenting feature allows users to review pages, post changes and suggestions, and ask questions on each specific piece of content. Commenting privileges can even be extended to factory production workers, dealers, and field service personnel if desired, to capture crucial tribal knowledge on the real-world use of parts during assembly and repair. Additionally, authorized users may upload documents and videos and relate them to existing parts, pages and books.

With these capabilities at hand, manufacturing teams can more efficiently work together and communicate across departmental boundaries, developing parts catalogs that

contain more accurate information than was possible in the past.

Eliminate complex system architecture or infrastructure

According to Lisa Garcia, a Document Control Specialist at a Midwest manufacturing firm, “Documoto is perfect. It’s exactly what people in publications are looking for: to be able to create parts manuals without relying upon desktop software.”

Most database publishing tools for the manufacturing industry require extensive infrastructure to get up and running. With these tools, OEMs must either purchase additional software components or develop their own in order to power the publishing engine.

As an end-to-end database publishing solution, Documoto comes standard with a powerful publishing engine so publishers can get started immediately. Operating from a subscription model, Documoto involves no significant, upfront investment, lowering the risk associated with development, accelerating the implementation process, and leveraging the development expertise of the Documoto team. This makes it a much more cost-effective option when compared to other leading publishing tools.

“

Docustudio makes a direct connection between engineering data and illustrated parts lists... This programmatic process eliminates the need to convert dynamic CAD data to static information and preserves dynamic parts data, making it immediately usable – and changeable – in a relational database.”

**- Mike Dulmage, Publisher
at Getman Corporation**

According to a recent survey³, 87% of companies look to their parts catalogs as the primary tool for parts sales. This makes parts catalogs a critical piece of sales strategy to increase revenue.

How Can Documoto Enhance Aftermarket Sales?

In our global, digital age, dealers and customers increasingly demand access to electronic catalogs that deliver parts information whenever and wherever they go. Since traditional desktop tools were designed to produce printed materials, the online version of a parts catalog is often an exact replica of the hard-copy documentation.

Documoto gives the end user a much more useful parts identification and ordering resource. With a single publishing effort, Documoto creates both a printable PDF and an interactive electronic parts catalog. In other words, technical writers can produce dynamic, digital parts pages without expending any additional effort.

By combining Documoto’s publishing features with its web library component, OEMs can share relevant documentation and media with dealers and customers on the cloud, 24/7, accessible by any desktop, laptop or tablet. This makes pages and diagrams that are not only clickable and searchable but also monetized, encouraging dealers to order directly from the online system for the most accurate information.

This capability presents a significant opportunity for OEMs to increase aftermarket parts sales and achieve faster turnaround time on orders. One manufacturing firm reported that 95% of their dealer orders were received electronically after making the move to Documoto and capitalizing on its ability to integrate with EAM, ERP and eCommerce tools.

Documoto offers manufacturers a better way to deliver information to dealers, customers, service technicians and other affiliated parties. Combining incredible ease-of-use

3. JANA Inc., “Survey on Parts Catalogs Reveals Industry Trends,” 2012.

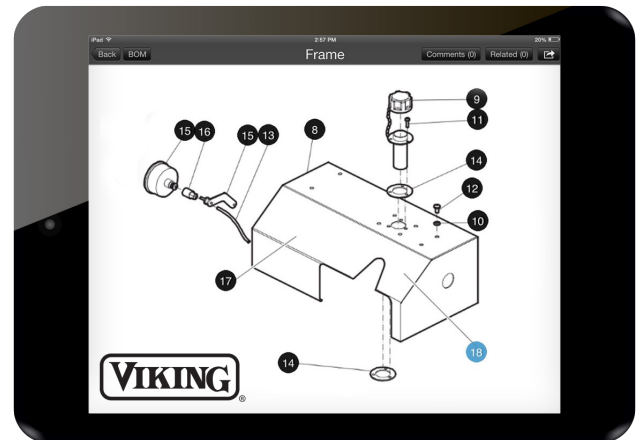
with the power of a modern database architecture, technical writers can generate the output they need, while effortlessly building an online parts lookup and ordering system to support aftermarket sales and service organizations. To find out more about how Documoto works to empower publishing, customer support, and aftermarket parts sales, visit www.documoto.com/learn-more.

Conclusion

Traditional desktop publishing tools used to develop parts catalogs have several shortcomings that jeopardize the accuracy, integrity and usability of the published information. Due to time-consuming manual formatting, redundant processes and difficulty reusing and updating content, technical publishers frequently experience avoidable delays when authoring parts catalogs with desktop tools.

Upgrading to a dynamic database publishing application helps OEMs avoid these publishing bottlenecks by automating unnecessary manual tasks. Documoto is an integral solution for optimizing the parts catalog publishing process. With Documoto, companies are easily able to:

- ✓ **Maintain formatting and brand consistency across all parts catalogs**
- ✓ **Reuse existing text, graphics and tabular data in new publications**
- ✓ **Update parts information in all instances with just a few clicks**
- ✓ **Collaborate with other users to create the most comprehensive product documentation possible**
- ✓ **Generate custom catalogs for specific customers or model numbers with minimal effort**
- ✓ **Generate outputs of both a PDF parts catalog and an interactive, cloud-based version simultaneously**



In short, Documoto helps publishing teams create, maintain and modify parts catalogs in a fraction of the time, with the potential for much greater returns, than other solutions.

About Documoto

Documoto is a full-service parts catalog publishing suite, web library, and eCommerce solution for manufacturers. Documoto provides solutions for aftermarket sales, ERP integration, and illustrated parts catalogs for OEMs and asset-intensive industries. More information, including product demonstrations, is available at www.documoto.com.

Interested in Learning More?

To see if Documoto is the right fit for your team, contact us at 303-957-2822.