JOYGLOBAL

Case Study

ProManual™ revolutionizes product documentation delivery

Project Challenges:

Challenge 1: As equipment size increases and equipment systems become more sophisticated, the documents used to maintain that equipment, product manuals, must follow the same trend.

Challenge 2: Joy Global must manage the challenge of its evolving product manuals while still maintaining the existing product documentation in the field.

Solution Design:

The Joy Global Product Documentation Team analyzed its processes for developing product manuals and maintaining documentation in the field.

First, the team noticed that although manuals were deemed specific to a single piece of equipment, nearly 75 to 85 percent of the content within the manuals was identical from one manual to the next. In some cases, the overlap was not just across models in the same line of equipment—there were similarities across the different lines of equipment, too.

"The ProManual application is a great tool and shows that Joy Global has a genuine interest in the success of the end user."

Eric, Senior Supervisor of Technical Training

Next, the team looked at how the manuals were used and maintained in the field. Feedback from users revealed that (1) manuals were often difficult to find, (2) when found, the manuals were too bulky to use, and (3) the content was outdated because company-issued updates were not regularly incorporated into the manuals. Therefore, the confidence users had in the accuracy of the documentation was very low.

During the user discussions, it became clear that the process for updating in-field documentation was ineffective. Outdated content and the lack of a formal process for users to report the discrepancies they encountered were the two main contributors causing low confidence in the product documentation.
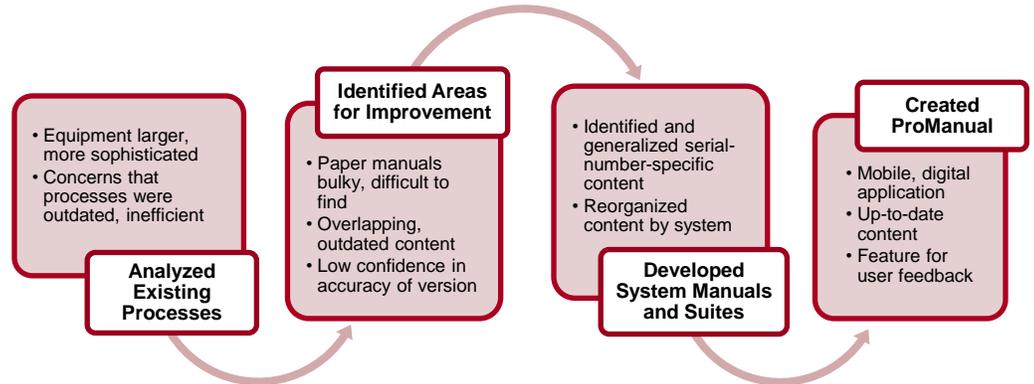
Traditional paper manuals were becoming too cumbersome to be maintained properly in the field. The processes for incorporating updates and allowing users to provide feedback needed to change.

The Solution:

First, the Product Documentation Team needed to rethink the design of the documentation. The team identified content that was identical within and across product lines, at the same time isolating the content that was specific to certain models. The model-specific content was generalized, and the overlapping content was revised to be reusable where possible.

Next, the content was broken down and organized by the type of mechanical, electrical, technical, or operating system it described, resulting in System Manuals, which can be grouped together to create Suites. Suites could contain System Manuals that pertain to a single or multiple models. Today, customers order Suites tailored to their needs.

Analyzed Existing Processes
- Equipment larger, more sophisticated
- Concerns that processes were outdated, inefficient

Identified Areas for Improvement
- Paper manuals bulky, difficult to find
- Overlapping, outdated content
- Low confidence in accuracy of version

Developed System Manuals and Suites
- Identified and generalized serial-number-specific content
- Reorganized content by system

Created ProManual
- Mobile, digital application
- Up-to-date content
- Feature for user feedback

With System Manuals established, the team focused on developing a modern, digital tool to make it easy to deliver and update the content. The tool needed to allow users to provide feedback. A mobile device was selected as the initial tool, and an application called ProManual was born.

"ProManual is a simple to use, powerful tool that every technician should be using."

Greg Swiderski, Director of Technical Development, Joy Global

ProManual is designed to manage the distribution of all new and previously developed Joy Global product manuals. While connected to Wi-Fi, ProManual allows users to be notified of documentation updates and download them to the mobile device. Once disconnected from Wi-Fi, downloaded documentation is available for use as required. Feedback can be created and sent to Joy Global through an annotation feature.

The Results:

ProManual is being used globally by more than 200 technicians in the field. It manages a growing population of documentation for over 120 mine sites and nearly 400 pieces of equipment.

When time is of the essence and equipment production is on the line, finding the right product documentation has never been easier. Users are confident that the manual being used is the latest version available. With an open line of communication, users trust they are contributing to the technical accuracy of the documentation, raising their confidence in the process and the product.