



## Converting Documents to SmartProcedures®



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# WHAT IS SMARTPROCEDURES?

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SmartProcedures is a specialized procedure solution that streamlines all phases of the procedure lifecycle. SmartProcedures makes it easier to create, manage, and distribute *better, faster, safer, and smarter* procedures.

Breaking through the limitations of conventional procedures, SmartProcedures controls information at the step level to provide flexibility, portability, and intelligence.

Storing XML-based information in a relational database for secure management and distribution, SmartProcedures provide a number of advantages over word-processed procedure files.

## BETTER

- SmartProcedures let you create more consistent, well structured procedures by enforcing formatting and structure from centrally-managed templates.
- Because SmartProcedures can include other information resources, such as work guidance media, SmartProcedures can reduce human error risks.
- SmartProcedures FlexViews® can transform a single procedure for output to multiple formats or devices, based on user need and context.
- Reducing the time writers spend formatting procedures by up to 50%, writers using SmartProcedures can focus on higher quality content.

## FASTER

- Because writers spend far less time formatting with SmartProcedures, they create procedures much faster.
- SmartProcedures automates creation of cover pages, tables of contents, glossaries, and other document components.
- SmartProcedures provides integrated edit and review workflow technology to automate the edit, review, and approval cycles.
- FlexViews speeds the training process and reduces training time, while improving comprehension and retention.

## SAFER

- The SmartProcedures step analyzer helps remove vague and confusing language, ensuring greater safety guidance.
- Because writers spend less time formatting, they can focus on higher quality content and safety issues.
- SmartProcedures includes access to related safety information, such as work guidance media.
- Because SmartProcedures offers FlexViews for use with PDAs or tablet PCs, field operators can have instant access to hundreds of procedures on demand.

## SMARTER

- Interactive SmartProcedures can capture signatures or data to verify proper adherence to safety guidelines.
- Each step can include visual guidance or electronic training media to ensure operators understand the task and safety requirements.
- FlexViews let you distribute procedures to multiple devices from a single source, providing access to the information without duplication of effort.
- Training views can provide a show and tell approach to make the information more accessible, resulting in safer operations.
- SmartProcedures is the specialized application you need to create, manage, distribute, and update structured procedures to help your organization comply with government regulations or business best practices.

## How SMARTPROCEDURES DIFFER FROM WORD PROCESSOR FILES

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SmartProcedures contains structured information that includes procedure text, step text, and metadata (additional information) about each step in the procedure. Because metadata is typically not included in word-processed documents, this value-added information must be added to your procedures when they are enhanced for use with SmartProcedures.

Storing XML-based information in a relational database for secure management and distribution, SmartProcedures provide a number of advantages over word-processed procedure files.

- **Single-source:** SmartProcedures leverage XML to separate format from content. This allows SmartProcedures to format procedures for multiple devices from a single source (FlexViews), preventing duplication of effort, while saving time and money.
- **Built-in Version Control:** You do not need an external version control application if you use SmartProcedures. Version control is built in, both at the step and procedure level, ensuring content is current and secure.
- **Centrally Managed:** With SmartProcedures, centrally-managed templates let you control both structure and formatting, freeing procedure authors from time-consuming formatting. Because authors can concentrate on more important issues, such as human factors, they create safer procedures.
- **Searchable:** Because SmartProcedures are stored as steps in a relational database, it is easy to search for, reuse, or update step-level content. This searchability also makes it easy for users to quickly access and use exactly the information they need.

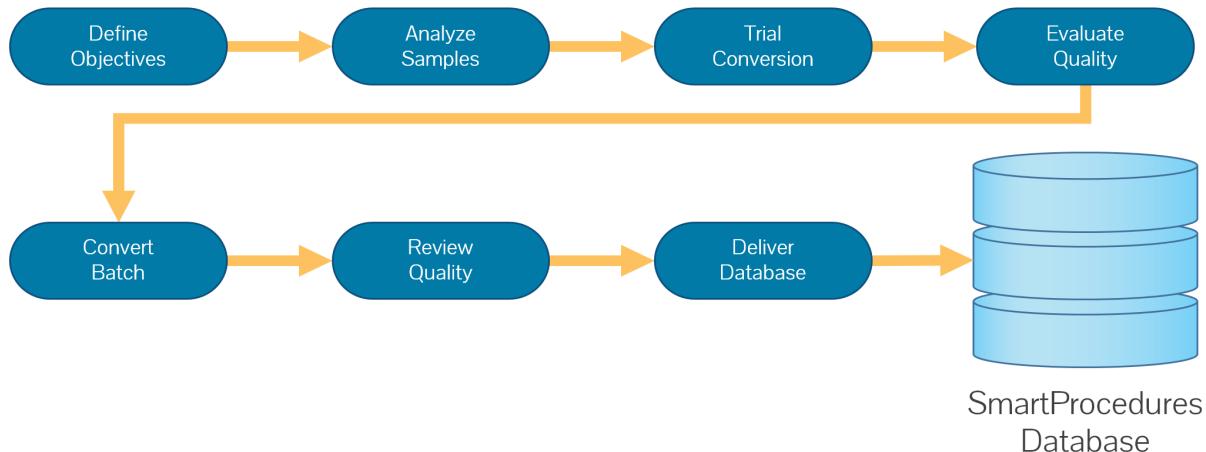
ATR has developed a comprehensive conversion process and can provide the framework for these enhancements as they convert your word-processed procedures to SmartProcedures.

## CONVERSION PROCESS

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Migrating from a word processor and file management procedure approach to the SmartProcedures procedure management solution requires some thought and planning so your company can smoothly transition to using the structured SmartProcedures paradigm.

**Figure 1: Typical Steps to Convert SmartProcedures**



The typical conversion process includes the following analysis, planning, and steps:

- 1 Together with your content management team, ATR helps define your objectives and time frame.
- 2 ATR analyzes a broad sample of your existing documents and performs test conversions to define the best conversion techniques and to automate the conversion process.
- 3 The conversion team converts a sample batch of your documents into SmartProcedures.
- 4 Together with your team, ATR assesses the quality of the converted documents and fine tunes the conversion process, if necessary.
- 5 Working with your team, ATR develops the output views (FlexViews) you want to use.
- 6 Your content management team provides batches of procedures for conversion.
- 7 The conversion team converts and then verifies the quality of the converted procedures.
- 8 ATR delivers an updated database with your procedure content in SmartProcedures format.

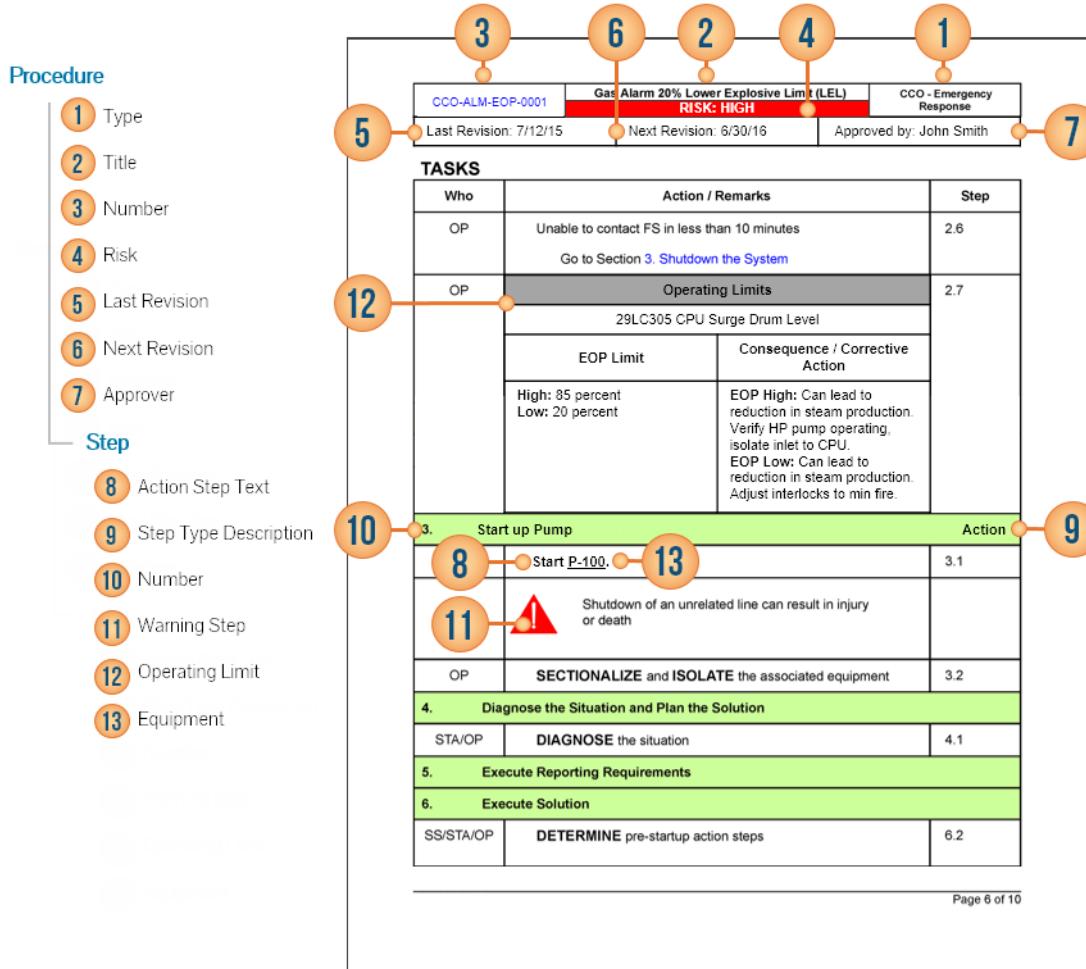
This batch conversion process is repeated until all your procedures are available in the SmartProcedures database for your use.

## LEVERAGING THE POWER OF SMART PROCEDURES

After you convert your procedures to SmartProcedures, you will want to augment the step properties to include additional training, learning aids, or other value-added information not previously available. For example, you can add safety or warning graphics, specify links to auxiliary information such as work guidance media, provide interactive properties, and provide other step elements.

Figure 2: SmartProcedures Properties You May Want to Add

### Parts of a Procedure



## DURING THE CONVERSION

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While the conversion is underway, if you do not currently use an electronic document management system (EDMS), you can use the built-in Document Manager in the PRISM Performance Suite to manage your current procedures.

To maintain a fully current procedure management approach, as procedures become available as SmartProcedures, you can archive procedure files and promote the SmartProcedures to the effective version.

## CONVERSION CONSIDERATIONS

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ATR has developed a number of tools to convert various document types into SmartProcedures with excellent fidelity. However, due to the extreme variance in word processed documents and missing metadata, converting the content to a structured format can require some judgment calls and decisions.

For example, if your documents are highly structured, uniformly tagged with word processing styles, and follow style guidelines strictly, converting these documents to SmartProcedures can be highly automated.

If your documents use a variety of templates, irregularly applied styles, or include specialized tables, images, and other inclusions, converting these documents can require more human intervention and time.

### **Highly Structured Documents**

Documents that are created using highly structured guidelines with strict adherence to style tagging, regardless of your structure, can be imported directly into SmartProcedures.

The built-in import filters can be tuned to match your input structure, mapping the document content directly in the SmartProcedures Editor. Then, by adding procedure and step metadata, the document is saved to the SmartProcedures relational database, ready for use.

### **Less Structured Documents**

Documents that do not consistently apply style tagging, structure guidelines, or regularized formatting require additional attention. ATR, Inc. has developed a number of methods to prepare these types of documents before importing to the SmartProcedures Editor.

In this case, the conversion team works closely with your content managers to define the desired results, develops a method of “tagging” content elements, and then imports the “tagged” version of the document to SmartProcedures.

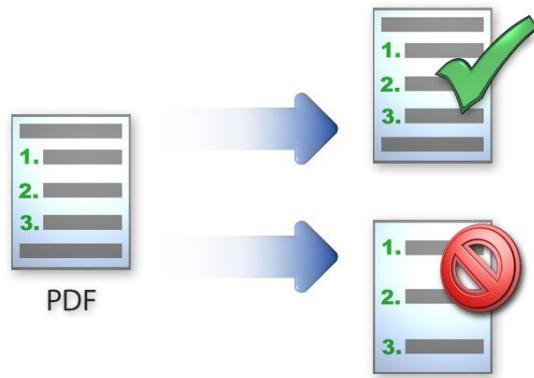
## QUALITY ASSURANCE

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At every step in the process, ATR, Inc. works with your content team to ensure high-quality output results that reflect your valuable information properly.

When you deliver documents for conversion, you also provide a portable document format (PDF) copy of the file. The PDF becomes the “gold standard” by which the conversion team assesses results.

Figure 3: Rigorous Quality Reviews for Excellent Fidelity



During the planning portion of the process, our teams work with you to establish the conversion process standards and checkpoints, so your results meet every milestone and expectation.

Because every converted document is checked both mechanically and by trained conversion experts, excellent results are the norm. Every quality check results in excellent conversion or provides an additional fine tuning technique to ensure your information is represented accurately and correctly.

# ATR CONVERSION AND UPGRADE PROCESS

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## Step 1: MS Word Source

- Review sample of document batch for number patterns, inconsistencies, and other anomalies prior to conversion.
- Consult with client about any irregularities or exceptions and seek further directions.
- Make decisions on treatment of operating limit tables and bulleted lists.

Optionally, database with original procedures can be available for client use during and after the conversion process.

## Step 2: MS Word Prep and Markup

Conversion Technicians prep the original MS Word documents by removing the redundant information that will become a part of the SmartProcedures configuration/settings (headers, footers, TOC, continuation headers, revision tables etc.)

Conversion Technicians use either a Word macro tool to mark up sections, steps, levels, tables, graphics, step types for processing in the Import engine; or, an appropriate filter can be created recognizing the items above.

- Step types should be completely defined and unambiguous.
- Testing occurs prior to volume processing.

## Step 3: Import Engine - Import

Using custom filter, the Conversion Technicians test, run, and optimize the filters to ensure minimal post -cleanup.

This process includes:

- Levels correctly identified
- Sections properly identified
- Distinct steps
- Steps classified correctly
- Bulleted steps properly classified
- No missing steps
- No duplicate steps
- Graphics linked
- Tables correctly identified

## **Step 4: Cleanup + Level I QA**

Conversion Technicians ensure compliance with conversion and writing standards and make appropriate adjustments, including:

- Spell checking
- Replace step references
- Replace global reference objects
- Link steps to equipment and operating limits

Technicians perform level I QA analysis. If required, step summary notes about missing information, incomplete sentences, misspelled words, and wrong numbering schema are added. In unique cases, such as step and section remapping, SME consultation takes place.

## **Step 5: Upgrade Procedure + Level II QA**

After Level I QA has been approved, the following Level II QA actions take place:

- Reviews in multiple print views
- Reviews in Procedure CBT mode
- Reviews in Step Analyzer Module
- Optional secondary technical writer and/or SME review

## **Step 6: Customer Review and Approval**

- Final QA by independent client reviewer to check on final output to comply with company internal standards and to ensure consistency.
- The reviewer ensures entire scope of work has been completed, and that an appropriate document control process has taken place.

# CONVERSION EDITING STANDARDS

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## Technical Accuracy

Converted procedures are required to be technically accurate reproductions of the original documents. Technical accuracy means:

- The major and minor procedure sections are exact literal duplicates of those in the original documents.
- All numerical values (acceptance criteria, limits, times, specifications, etc.) are exactly representative of those present in the original document.
- Graphics and tables (i.e., charts, figures, pictures) are the exact representations of, and in the same relative locations as in the original document.

## Fidelity

Unless format deviations have been approved, converted procedures are required to be as close a facsimile to the original procedure as can be obtained through the SmartProcedures conversion process. Close facsimile means:

- No typographical errors have been introduced during the conversion process.
- Procedure title and procedure number should match original documents exactly.
- Graphics will be converted in the same size and file quality. In cases where large graphics are sized smaller than would be legible in a PDF, adjustments will be made to ensure the graphics are as readable as possible.

## Resolving Formatting or Functionality Issues

Conversion Specialists are responsible for promptly reporting all formatting and SmartProcedures functionality issues to the Lead Conversion Specialist or the Project Manager for resolution.

SmartProcedures or process-related problems and issues are to be captured and reported to the Lead Conversion Specialist or the Project Manager for resolution.

## Proof-Reading Standard

Each document shall be reviewed (proof read) thoroughly by the Conversion Specialist against the standards presented in a Conversion Guide created specifically for your project.

Errors discovered during proof reading shall be corrected by the Conversion Specialist and deviations resolved prior to submitting the converted procedure for initial verification.

The initial verification is performed by a different Conversion Specialist. The review shall consist of, at a minimum, a literal proof reading of the document and a comparison of the content of the edited document to the original document.

## Verification Standard

Each document submitted for final verification shall be reviewed thoroughly against the standards presented in the Conversion guide created specifically for your project.

*Verification Standard*

In addition to the proof reading performed by the Conversion Specialist responsible for final QA of document and the Conversion Specialist who performed the initial review, each document shall be independently verified by a qualified verifier (typically the Lead Conversion Specialist) prior to submitting the converted procedure for client acceptance.

- Each final verification shall consist of, at a minimum, a literal proof reading of the document and a comparison of the content of the converted document to the original document.
- Errors and deviations discovered during verification shall be clearly communicated to the Conversion Technician responsible for conversion.
- Errors shall be corrected and deviations resolved prior to submitting the converted procedure for client acceptance. Issues requiring client involvement are documented in the Step Summary notes for escalation and record keeping.

