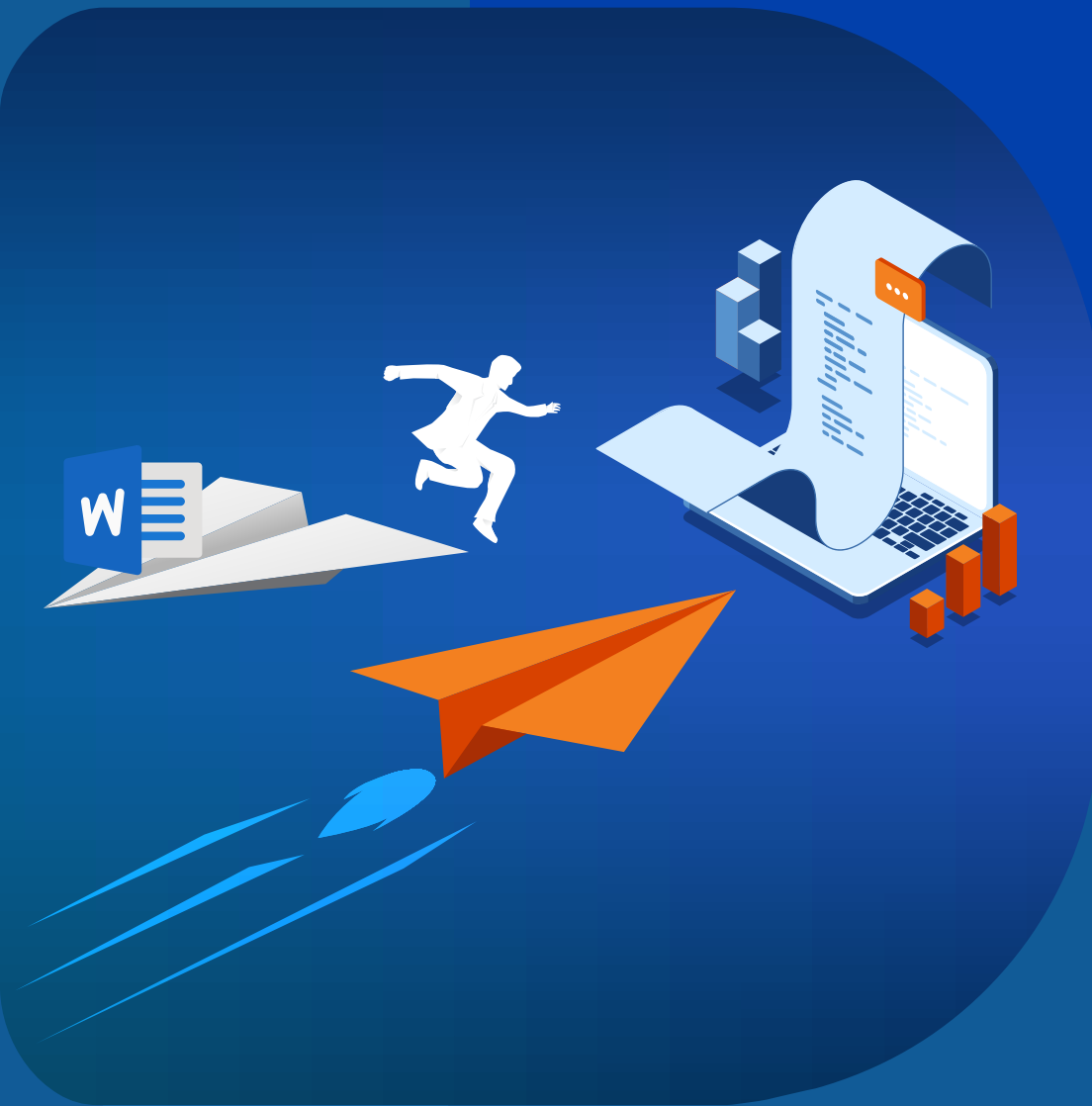


Technical Documentation & Publishing for MedTech companies - Determining the Highest ROI Solution & moving away from Microsoft Word



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Microsoft Word has been around for a long time and is used by over half a billion people. Enterprises often use it to produce a large percentage of their documents across multiple functions/departments since it is known by many people and has a relatively low entry cost. Word is a good 'text processing' tool for writing whitepapers and simple business documents/reports, but inefficiencies are introduced when technical communicators use it to create long and complex technical documents like technical documents, procedures, user guides, handbooks and reference manuals with embedded graphics and videos.

Enterprises are motivated to migrate from Word when they realize that the way they currently create technical documents is not able to keep up with growth in an enterprise's products and services, growth in document translation, and growth in publishing formats beyond traditional print and PDF such as online formats.

This Whitepaper presents:

- Factors that drive the cost of technical document creation
- Methodologies that can increase operational efficiency in technical publishing
- Whether Word can implement the desired methodologies and achieve sufficient dependability in technical publishing projects
- The reasons for the Total Cost of Ownership (TCO) to create technical documentation using Word being more expensive than expected
- Word dependability pain points experienced by your technical communicators
- The requisites for a successful migration from Word to another authoring and publishing tool for technical publishing projects
- A list of desired attributes for ideal authoring and publishing tools for technical documentation
- A specific solution that has a higher Return on Investment (ROI) than Word in technical documentation projects, and allows an enterprise to get products and services to market much faster at a lower cost, thereby increasing an enterprise's overall profitability and efficiency

As an enterprise increases the variety of products and services it offers, additional technical documentation is needed.

The choice for enterprises is to either increase technical documentation staffing (or required hours within the teams) staffing or to increase the efficiency of how the documents are produced.

What drives the cost of technical document creation?

One of the largest cost factors in document creation is labor. The amount of labor performed by technical resources is based upon the volume of documents that must be written, the number of writers available and their efficiency. If the volume of documents is too great then it's necessary to defer the work, increase the number of writers or the efficiency.

Current trends that increase the volume of documents

A number of factors can increase the volume of documents that an enterprise must produce:

✔ Growth in products and services

As an enterprise increases the variety of products and services it offers, additional technical documentation is needed.

✔ Global growth

Customers around the world expect technical documentation to be translated to their language and culture.

✔ Paper documents replaced by digital content

Traditional papers for technical documents are rapidly being replaced by digital content because paper can be inconvenient to share, expensive to distribute, and difficult to search for answers. Users want the smallest amount of information that will solve their need in an easily consumable and immediately actionable format.

✔ Interactivity

Today's customer wants to give real-time feedback on digital content, such as reporting errors in documentation and contributing new content. This requires new in-built mechanisms. Also, users demand that content to dynamic and interactive in nature, rather than static text and graphics.

✔ Electronic formats increasing

The number of electronic document formats continues to expand beyond traditional formats like PDF files, software application help, and online help pages.

Single sourcing is a documentation methodology that enables you to reuse a modular chunk of information— also called an object—in multiple documents.

Creating technical documents efficiently

The volume of documents that an enterprise is required to publish will continue to increase. Following that analogy into the documentation environment, we have three basic, inter-related concepts to implement before you can start to achieve 'document manufacturing' efficiencies:

- Consistency of document look and feel, tone, structure and writing style ('format' standards)
- Reuse of content
- Specialization of tools to fit the 'role'

Most technical writers are creative, which is a positive attribute unless it results in the creation of inconsistently formatted content or delivery of information not in the sequence that the reader may expect. For example, multiple writers usually work together to create a large document, but if each of them writes as per their respective styles, the reader will notice that the document doesn't have a consistent tone, style, or structure, which can result in a negative 'quality' perception about the product and the company – or a call to customer support if the document is confusing.

Reuse of content requires writers to think creatively about how to repurpose content, and how to write reusable content modules.

Let's examine specific efficiency methodologies that address both 'style' and 'reuse' and some of the challenges enterprises face in achieving them.

Using format and writing style guidelines

An enterprise can reduce document creation costs by creating style and writing standards defining the appearance of documents. These styles ensure a consistent look and feel, incorporate company branding into all the document deliverables by using a standard company logo and consistent color palette as well as corporate terminology usage. Formatting involves establishing paragraph styles for headings (Headings 1, 2, and 3) and body content (Normal, indent, bullets and numbering) and then applying the appropriate style to each paragraph. Traditionally, writers follow a style guide that defines an enterprise's standards for editing and formatting, where a person acting as an editor is responsible for ensuring that writers follow the style guide.

Unfortunately, today's constrained resources often require the technical writers, authors, and communicators to be their own editors. Given the large number of styles in a typical style guide, this can be problematic. Also, since each author has a different style of writing, the lack of an independent editorial review often leads to inconsistencies within and amongst document deliverables.

Using templates to implement document structure efficiencies

The requirement of reuse forces writers to think about structuring content within a single deliverable and across multiple deliverables.

Companies found that shrinking budgets and increased workloads are motivating content developers to look for ways to reduce development costs. One solution is to reduce the amount of time that authors, especially Subject Matter Experts (SMEs), spend formatting documents. SMEs waste a stunning 30% to 75% of their time formatting documents in non-structured (freestyle) authoring tools. By using structured authoring to enforce consistency, writers don't have to worry about formatting because the styles are applied automatically.

Structure may be thought of as a pattern. Following a pattern provided in structured authoring can speed the creation of content and provide consistent, reusable content.

When users read a technical document, they usually have an expectation about the content and its presentation. For example, when a consumer reads the user manual for a gadget, they expect to find the table of contents followed by a description of product features and benefits in an overview, and finally the sets of step procedures on using the gadget's basic functions. If the writer has decided to remove the table of contents and document the steps in the form of paragraphs, it would make it difficult for the consumer to find and use the information because the expectation of a logical order and appearance is unfulfilled.

Standardized templates ensure a consistent structure and style. The requirement of reuse forces writers to think about content module types. Template standards typically include modules like:

- Concept modules: paragraphs of information that describes an idea, answering the question 'What is...'
- Task modules: step-by-step description to accomplish something, answering the question 'How do I...?'
- Reference modules: reference information that you look up rather than memorize, such as tables and lists

Technical writers often gather information from SMEs by giving them a template to fill out. For example, a task template to document a procedure may contain the name and purpose of the procedure, introductory information, and the task steps. Once the SME fills out the template and returns it, the technical communicator edits and refines the writing. By having all writers use the same templates, the overall structure of the document should be consistent.

The reality is that templates are difficult to enforce if authoring tools are not chosen carefully. For example, if templates are set up in Microsoft Word, writers and SMEs can still change the structure and the paragraph styles.

Using single sourcing with modular content

Single sourcing is a documentation methodology that enables you to reuse a modular chunk of information—also called an object—in multiple documents. First, you build objects such as procedures and tables and put them in source files. Then, you organize them into documents, such as manuals and websites. Finally, you link them together into cross references such as tables of contents and indexes.

If you change an object, it automatically changes in all the other documents that reference it. Compare this method to the traditional copy/paste, which can be a nightmare to maintain. There are several money-saving advantages to single sourcing:

- Reduced translation costs since chunks of text are reused and therefore not retranslated. This can be a major cost saving in enterprises that have more than one language to translate to.
- Increased consistency of information presented.
- Reduced development and maintenance costs and shorter time-to-market efficiencies.
- Rapid reconfiguration since small content modules can be rearranged to create something new.

Using structured authoring

Using structured authoring can be thought of as authoring with templates on steroids. The content rules are defined and are rigidly enforced and validated by the software the author is using. For example, content rules define what type of information should follow a heading 1, whether a minimum of two bullets in a list is required, and rules for images and if image captions are required.

With structured authoring, content is completely separated from format, so a writer can focus on writing and not on appearance. This separation allows multiple publishing audiences and delivery formats (PDF, online) to be derived from a single source, and increases reuse of topics and modules across product lines.

The single most important reason why so many companies are considering structured authoring is the ability to 'future-proof' documents that need to be delivered on the devices and platforms of the future.

A good CMS keeps structured content up to date and makes it easy to locate content for reuse and publishing, such as filtering for publishing into different formats.

Using a unified content strategy

A unified content strategy is defined as a repeatable method of identifying all content requirements up front, creating consistently structured content for reuse and managing it in a definitive source, and assembling content on demand to meet customer needs. If your enterprise generates a lot of content, you should consider using an experienced content strategist to lead the development of a unified content strategy.

Using a Content Management System

Many organizations find that a Content Management System (CMS) can help them manage large amounts of content productively. A good CMS keeps structured content up to date and makes it easy to locate content for reuse and publishing, such as filtering for publishing into different formats.

There are different types of CMSs, but unless you need a specialized type, a component CMS would be a good choice since it manages content at a granular level, as compared to the document or page level that most others use.

A CMS is not an absolute requirement for reuse of content. If your analysis determines that a CMS is not right for you, your staff should have the technical knowledge to set up content reuse.

If your analysis determines that a CMS is right for you, then verify that the authoring tools you choose integrate well with popular CMSs, ideally, at no additional cost.

In authoring, the ability to customize the authoring tool to match the role of each contributor cuts the learning curve and training costs dramatically.

Using roles-based tools

Customization is vital. In an assembly line the tools that a worker uses are exactly matched to the need of that station. In authoring, the ability to customize the authoring tool to match the role of each contributor cuts the learning curve and training costs dramatically. Not everyone needs to be trained on every aspect of document creation and delivery, and not everyone needs every single tool with every feature activated.

Roles might include technical communicator, SME author, publisher, and content manager. Each requires very different capabilities from the tools. For example, an SME author would need to fill out a template and review documents, whereas a technical communicator may need to create templates, author, and incorporate reviewer edits. In addition to the technical communicator tools, a publisher would need to have additional tools to deliver content to the media output required. All reviewers would need to have the right tools for conducting documentation reviews, and review comments should lend themselves to easy aggregation, filtering, and incorporation.

Using tools that support publishing and reviewing

In addition to the authoring issues we have examined, enterprises need powerful publishing and reviewing capabilities. This is where many tools fall short. The tools must be able to publish to all the required outputs, such as print, PDF documents, online and mobile outputs. The tools must also support a full reviewing cycle, where documents can easily be sent to reviewers, reviewers can easily make changes, and their comments can be easily incorporated.

Using dependable tools

Enterprises demand high levels of dependability in the tools that they use for authoring and publishing technical documentation, regardless of the size of the document, the amount of content it contains or the type of content. Service and support are essential in large enterprises and a large pool of certified professionals for training, writing, consulting and template design needs to be available.

Microsoft Word evaluation

Efficiency methodologies support

In our final analysis, does Microsoft Word support the efficiency methodologies we discussed that enterprises require for technical documentation? Let's look at a summary of our analysis.

| Efficiency Methodology | Can Word meet the needs of an enterprise's technical documentation? |
|--|--|
| Using format and writing style guidelines | NO. Word allows styles, but it has no mechanism to enforce content writing style and prevent the author from changing the formatting styles or using the ribbon menu to make style changes |
| Using templates | NO. It is possible to compose a template for authors to fillout, but Word has no mechanism to prevent the author from changing the styles and the structure of template. Overtime, a template with no means of enforcement will fail. Ideally, the tools must be able to separate style from content and enforce the structure rules. |
| Using single sourcing with modular content | NO. Word lets you include pieces of content, but it does not have the mechanisms built into it to allow enterprise-level reuse and single source. |
| Using structured authoring | NO. Word only supports unstructured authoring and it does not support a mix of unstructured and structured documents. Word does not allow straight forward authoring in XML. Although its internal structure is XML, it is proprietary and exports to a flat XML text file that is not easily used or transformed into something usable. |
| Using a Content Management System | NO. Word can not interface with CMSs. |
| Using role-based tools | NO. Word can not be customized for the role of each contributor. |
| Using dependable tools | <p>Unfortunately, Word is not dependable in the following common technical documentsituations:</p> <ul style="list-style-type: none"> • Long documents are known to increase the chance of crashing Word or corrupting the document, especially if a computer is low on memory or if a document has several heavy graphics and tables. • Graphics tend to shift around unpredictably in large documents. • Word has problems generating table contents and index in large documents. • Changes in page layout (single to multi-column) still require insertion of 'sectionbreaks', which can corrupt adjacent, numbered headlines. • Long, multi page tables with a graphic in every row are almost guaranteed to make a Word file crash. |

Jumping to structured documents immediately is often too big of a leap, so your authoring tools should allow for a gradual migration.

Conclusion

Word wasn't built to handle the methodologies that enterprises need for efficient creation of technical documentation. Some organizations have tried to force Word into enterprise-level methodologies by adding plug-ins and proprietary macros. Just as a trucking company would never try to turn a car into a truck because they were designed for fundamentally different purposes, eventually enterprises realize that—no matter how much it is modified — Word was never intended to meet demanding, high-volume technical documentation methodology requirements on an enterprise scale.

Microsoft created Word as a mass market, easy-to-use text processing product for everyday business use. That market is huge in comparison to the market for technical document authoring and publishing tools. The hard truth is that Microsoft isn't focused on your enterprise's technical documentation productivity issues because that market is comparatively so small.

Enterprises need a professional set of tools specifically designed for efficient technical documentation authoring and publishing.



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