

# Top 10 Trends Driving the Technical Communication Industry



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## Top 10 Trends Driving the Technical Communication Industry

Technical Communication, while not in its infancy, is witnessing a number of fundamental shifts thanks to globalization, the advancements of the internet and mobile device connectivity. This growth is enabling otherwise specialized individuals to branch out into new and exciting areas, expanding on the more traditional roles of technical writing. Even educational institutions are migrating towards the common term of “communication studies” to encapsulate and cohere the vast depth and breadth of the field.

The following describes a number of key trends that continue to emerge or build in the technical communication industry. While some may simply reinforce existing positions, others add credence to what many may have intrinsically discerned through personal experience.

### Trend #1: Adoption of Structured Documents

One of the foremost trends in the Technical Communication industry is the movement to structured documents. These documents use some method of embedded coding or markup to provide structural meaning according to an agreed upon organizational structure or schema. Structured document practices act as the foundation for many benefits including content reuse, single sourcing, and more.

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**“Document schema’s can range from highly structured standards, such as DITA, down to less pragmatic pseudo-structures depending on the individual requirements or intentions of the organization. In short, economies of scale typically drive the movement to structured documents, where the implementation of strict structured documents is generally seen in larger organizations” (Matt Sullivan, Roundpeg Inc.).**

Seen primarily as a cost cutting measure for larger, global organizations, the movement towards structured documentation can require significant work; larger organizations being better suited to absorb these initial costs. **“Where teams include over fifty writers, there is compelling justification to adopt structured document practices.**

**A team of only one is less likely to need to produce structured documents” (Sarah O’Keefe, Scriptorium);** although ideally, content still needs to be semantic. **“For teams in between (i.e., 10 or more), the expected benefits vary” (O’Keefe);** there is no universal tipping point.

Organizations with a global audience use structured documentation to facilitate additional cost benefits around multilingual translation. While this may introduce new restrictions, such as **“shorter sentences for easier translation, some educational campuses are teaching this style of writing for a global audience. While this is important, its adoption has unfortunately been relatively slow. As such, software tools are available to guide writers on the fly” (Maxwell Hoffman, Globalization Partners International).** Some organizations have been able to automate up to 75% of the formatting that typically requires some adjustment after document translation. For example, templates have been used to serve 28 languages reducing the burden of maintaining separate formatting templates for each language group.

While headlines around the movement towards structured documents are typically seen among larger organizations, its support amongst smaller organizations is continuing to grow, due in part to a lower barrier to entry. Similar to the way evolving tools replaced the technical details around SGML with WYSIWYG (What You See Is What You Get) interfaces, so too are tools hiding the complexities of XML and more structured approaches.

Tools like Adobe® FrameMaker® help to ease the pain of moving into structured documents, allowing smaller organizations to more easily adopt these practices. Similarly, organizations typically have a significant investment in older unstructured documentation that must be converted through a phased approach. As such, this requires tools to support both structured and regular use modes.

Implemented alone as a cost cutting measure, or as the foundation for other goals, structured documentation practices support a number of other areas such as content reuse, multi-channel publication, single sourcing, agile documentation, and more. One of the most attractive benefits of structured documents is the ability to reuse content in many contexts and present them in various ways on mobile devices, TV screens, and a variety of other devices capable of processing the documents.



## Trend #2: Shift Towards Single Source Publishing

For some time, writers have produced content knowing that the next sentence would fit within the context of the complete document. Single sourcing allows the same content to be used in different documents meaning writers no longer have the luxury of knowing where their information block is going to appear.

Single sourcing has increased in popularity given the requirement to produce multiple relevant deliverables (e.g., technical manuals, help systems, knowledgebases, eLearning content, etc.). It allows the same content to be reused in a number of deliverables, dynamically generated as required (not to be confused with transformation between technical formats such as PDF or HTML). This also means any visual style is typically separate from the content structure. While this may be problematic for those who are meticulous about tweaking every page of a document (i.e., removing orphans at the top of a page), it is advantageous for vendors who OEM products and provide white label documentation, or in situations where content is pulled in real-time from databases, XML files, content management systems, and the like.

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Using the same content in a  
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generated deliverables

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While the use of structured document practices supports single sourcing (particularly where high volume and high page counts are concerned), it is not necessarily a requirement. For example, **“instead of creating two versions of a single document to address varied models of a product, some tools support the use of build tags in an unstructured document to conditionally include (or exclude) information. Where document creation teams are small, this eliminates the overhead and costs associated with a formal structured document implementation, while still achieving benefits such as faster editing of corrections” (Kevin Siegel, Iconlogic).**

An alternative example might be in the area of Agile Development. Technical documentation publishing for software developed using an Agile approach can be delivered through a fully structured approach or through a hybrid model that consists of traditional desktop publishing tools and infrastructure. While both models are set up for single-sourcing and reuse, maybe to a different degree, they can both still support the Agile methodology for technical documentation purposes.

## Trend #3: Added Complexity in Multi-Format/Multi-Channel Delivery

With the infiltration of multimedia devices and digital gadgets in our modern lives, publishers are pressured into or proactively looking to capitalize on ubiquitous delivery of content through multiple formats. While paper manuals and electronic help files locally stored on the PC have their place, these are quickly eroding in favour of online documentation that can be quickly updated with new information in conjunction with new software releases and customer feedback.

While PDF is increasingly becoming the vehicle for exchanging information in an interactive and universal format, multichannel delivery is more than simply providing an electronic version of a print manual. Multichannel delivery focuses on providing users with content that can be consumed through the channel of their choice (e.g., print, PDF, EPUB, HTML, CHM, etc.).

**“Some cultures and industries have been slower to adopt multichannel delivery other than an electronic version of a print document. However, innovations such as the Apple iPad have had a significant impact, generating additional momentum in these cultures to deliver interactive electronic documentation” (Alberto Franzetti, Antea).**

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**“In this competitive landscape, some vendors feel delivering an Apple iPad loaded with documentation presents a more positive image compared to the stacks of manuals they originally provided” (Franzetti).** In other industries it offers a more practical application. For example, Alaska Airlines has embraced the Apple iPad loaded with manuals as an alternative to the 25 plus pounds of charts and manuals pilots must lug aboard each flight. The Federal Aviation Administration is even revising its rules to establish guidelines for the use and certification of these devices in cockpits during takeoff and landing.

The use of structured document practices helps support the publishing of multichannel documents through the facilitation of reuse and single sourcing; although again, it is not a requirement. For example, tools such as Adobe FrameMaker and Adobe RoboHelp® work together to support the management of content and output formatting and modality whether or not it is formally structured. This allows smaller teams to address the many needs of its customers through print, PDF, HTML and more.

## Trend #4: Providing for Mobile Delivery

Today, users want content to be available to them anywhere and at any time. The explosion of mobile and smartphone devices provide capabilities well beyond the PC's of yesteryear. Capabilities continue to expand, supporting internet access, location based GPS data, and more. Traditional terrestrial digital television broadcasting has even developed standards to deliver mobile digital TV over the air as opposed to relying on internet based streaming. While delivery to mobile devices may be considered a subcategory to multichannel delivery, it does require additional considerations beyond content formatting and modality.

**“Without question, mobile devices and smartphones are increasing in popularity. As these devices proliferate, technical communicators continue to get a better understanding of the new opportunities and pain points that exist” (John Daigle, Evergreen Online Learning).** While some vendors continue to simply deliver electronic versions of print manuals, reduced screen sizes and limited connectivity impose new considerations for the consumption of content.

Responsive Web Design focuses on the delivery of HTML through a single implementation that adapts to the size (and orientation) of the viewing device. This technique delivers flexible layouts and images to cater to the individual specifications of the varied mobile devices compared to the more rigid layouts of electronic versions of print documents.

Situations around cellular signal strength may also dictate how content is delivered to mobile devices. For example, online maintenance manuals may be problematic where cellular signal strength may be rapidly attenuated due to destructive interference of the construction materials used in some buildings. In these cases, locally stored documentation may be a better option; however, this may add concern about the synchronization of updated materials.

Today, documentation catered directly to mobile devices and mobile applications is limited, and there is a growing opportunity to deliver content that has been optimized to meet their lightweight requirements. In addition to delivering content through multiple channels, specific consideration must be given to mobile devices; providing an opportunity to publish to full PDF, create dynamic web experiences, and offer shorter condensed versions of content.

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## Trend #5: Increased Demand for Topic Based, Context Specific Help

Educated users have become specialists in the kind of content they want to consume. Rather than looking through the entire library of technical content every time a user needs to refer to a particular area of interest, search engines like Google and Microsoft Bing have significantly increased the searchability and findability of content online. Unfortunately, search results may not always reference the official source, potentially leaving brands open to erosion.

Rather than forcing users to search through entire documents, the use of contextual help provides faster results, delivering targeted and relevant information to users at the specific time it's needed. The realized benefits are not limited to end consumers. For example, **"while the delivery of contextually relevant content can reduce call volumes to a support desk, readily available and contextually relevant content for common support scenarios can help reduce training costs for call center staff. This can also reduce requirements to place customers on hold while consulting second level technicians, in turn helping increase customer satisfaction and confidence levels in the corporate brand"** (*John Daigle, Evergreen Online Learning*).

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Given the multitude of ways users access documentation, context sensitive help or personalization also needs to take into account the delivery channel. For example, to this point, mobile and web based applications do not provide the same degree of context sensitive help compared to traditionally delivered software; be it local help files or through online delivery. While the use of structured content can support the delivery of context sensitive help, it does not necessarily address the multiple learning styles of its potential users.

## Trend #6: Drive Towards Multimedia Communication

Whether based on individual learning styles (e.g., visual, auditory, and kinesthetic), or the perceived preferences of various generations (e.g. teens watching less online video than adults aged 25-34), customers are pushing for a shift from traditional text based communication towards multimedia (i.e. audio, still images, animation, video, and interactive content forms). This of course depends on the content of the material (e.g., tactile manipulation vs. software specifications) to which the presentation may be best suited. The shift however is significant in that colleges have started adding Technical Communication degrees or sub-interests in the same department as film and television.

While the movement towards structured content is often used by larger organizations as a cost cutting measure, the movement towards online video is one of quality and not cost control. Specifically, **"there is an increased cost associated with producing video, multimedia, and simulations with estimates averaging 300 hours of effort to produce 1 hour of eLearning content; depending on complexity"** (*Kevin Siegel, Iconlogic*). However, while it may cost more to produce than traditional text, it can provide a higher return on investment through increased customer satisfaction and reduced support related calls, thus cutting down on resources and frustrations with a "system" or product.

Two examples where multimedia has been advantageous is in manufacturing and maintenance. **"Manufacturing continues to reduce text and increase its use of graphics (3D Models and CAD tools) for technical communication to help eliminate misinterpretation of text, reducing costs around production and sourcing of third party manufactured parts"** (*Alberto Franzetti, Antea*). Similarly, **"more interactive 3D graphics and animation help to speed repair and maintenance processes in the field"** (*Rick Quatro, Carmen Publishing Inc.*).



While the industry is seeing movement towards video and animation to supplement learning materials, it introduces new issues and complexities around the findability and searchability of content. Users may now be required to sit through a lengthy video hoping it contains the appropriate information as opposed to visually scanning or searching through printed documentation. Similarly, support for translation becomes more problematic for global organizations that must address multilingual audiences.

To address the needs of searchability and findability of video content, tools such as Adobe Captivate® provide facilities to index content within a multilevel Table of Contents allowing users to easily navigate to relevant sections of content. XML file imports support the import of translated text for the localization of captions, while text-to-speech reduces the manual creation of multiple language soundtracks. As speech recognition technology improves, automated transcribing of videos will only increase their searchability. Further, support for publishing to a variety of formats addresses the need for multichannel delivery.

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## Trend #7: Social Interaction, a Springboard for Direct Customer and User Input

Social networks are playing an increasingly important role in the user assimilation of information. With increased facilitation for information sharing and collaboration (Web 2.0 if you will), everyone has a voice. **“No longer are technical writers the sole gatekeeper of product information but are becoming more accountable for the material that they produce” (Sarah O’Keefe, Scriptorium).** In fact roles are changing. Dedicated “tweeters” are employed to disseminate product information and assess feedback, while Content Aggregators incorporate community input and address customer feedback.

The incorporation and utilization of social media in the role of user communication is situational dependent and may be particularly useful amongst consumer products. However, **“something as seemingly benign as help documentation for accounting software can benefit from commenting and feedback facilities. While an organization may not want to share comments and input externally for fear of exposing intellectual properties, incorporating these facilities for internal participation can help optimize the learning of software features and specific processes, and how they are applied within the organization” (Peter Grainge, Advanced Business Solutions).**

No longer are customers passively consuming content assembled by technical communicators. The advent of rating systems, commenting, and discussion forums, whether provided through official channels or not, allows them to actively participate, optimize their use of, or solve issues around their purchases. In short, the official company website is no longer the default source for content, but rather search engines

like Google, Microsoft Bing, and Yahoo. **“Whether or not vendors provide options for feedback, customers expressing opinions on external sites could become a more authoritative voice than the official documentation” (O’Keefe).**

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Vendors increasingly need  
to provide an adequate  
avenue for customer feedback

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Vendors who provide social facilities through official channels are increasing the likelihood that search results point to the official source. Vendors who take an active role in the aggregation of information, incorporating community input and addressing comments, are witnessing more vibrant communities which in turn help build equity and customer

loyalty towards a brand. However, it is important to note that community generated content is not a replacement for initial documentation; an initial draft at a minimum must be available to stimulate conversation.



Some organizations have attempted to eliminate the creation of documentation almost entirely, relying on the community to generate and amalgamate content of their own volition. While this has proven successful in the open source community, it is a cooperative activity that is initiated and voluntarily undertaken by members of the public. There is typically a vested interest. Without the prerequisite numbers or the proper motivation, “crowdsourcing” from the commercial perspective has rarely been successful. Additionally, a lack of quality documentation may be perceived as a ploy to increase training related revenues, while a discussion forum is not a substitute for customer support but does allow the opportunity for peer users to respond.

Vendors increasingly need to provide an adequate avenue for customers to make recommendations while supporting the inclusion of detailed discussions as input to documentation modifications. While social collaboration is not a substitute for quality documentation, it does provide a spring board for customer and user input to solidify and optimize existing documentation. Even without facilities for rating and commenting on content, users are still providing valuable statistics about the topics of high interest and the paths that are required to find it.

## Trend #8: The Growing Role of Reporting and Analytics

The Technical Writer community is home to one of the **“most famous self denigrating slogans; ‘no one reads the manual’” (Alan Houser, Group Wellesley)**. And yes, Gadget Helpline, a UK tech support service found that 64% of men and 24% of women don’t read manuals before calling technical support. However, services like Google Analytics provide **“evidence that people do read with far greater numbers than expected” (Houser)**.

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Focus resources on items that provide higher customer value

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More than simple page view statistics, products such as Adobe RoboHelp Server record search terms (including common misspellings), traffic patterns, frequently viewed content, and more. Information such as this can be used to generate reports to provide organizations with insight into what customers may have been looking for and more importantly what they couldn’t find. Through detailed reports, **“not only do technical communicators have improved metrics to show how they provide measurable value, but organizations can also focus resources on the more popular items to provide higher value to customers more quickly” (John Daigle, Evergreen Online Learning)**.

## Trend #9: The Specialist, the “Jack of all Trades”, and the Growing Chasm

Unquestionably, there will always be a requirement for subject matter experts. However, the explosion of multichannel delivery, social interaction, multimedia, mobile delivery, and more, appears to be widening the gap between specialized roles (technical writer, video producer, etc.) and the “Jack of all trades” technical communicator. Where economies of scale can increase the likelihood towards structured document practices, the inverse seems to be applicable in terms of a technical communicator’s toolbox.

Many large organizations, or those without management buy-in (less acceptance of other skills besides the core requirement), still focus on specialized individuals for text, layout, video, animation and more. Specifically, multinational “technical writers are there to write documents.” Conversely, technical communicators in smaller organizations, and freelancers, are required to address many of these areas. In short, smaller organizations are less likely to afford a team of specialized resources.

Given the economic environment, it behooves individuals pigeon holed into a traditional technical communication role to continue self education, expanding their toolsets and techniques. Traditional technical communication tasks continue to be commoditized and

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The right tools facilitate content production that is more than simply ‘good enough’ without the need for a specialized role

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are increasingly outsourced, forcing technical writers back to school into training classes to **“leverage their core competencies and expand into other areas such as business analysis, product development, user interface design, social media, instructional design, and more” (Jack Molisani, The LavaCon Conference on Digital Media and Content Strategies)**.

What is important to note, is that the term “communications” covers a wide range of disciplines. For example, a bachelor of communications degree still allows individuals to specialize in such areas as screen production, film, television, digital media, journalism, public relations, marketing or the cultural industries. And within each of these areas there

is also room for specialization. The focus here is on the traditional role of the technical writer expanding into what some refer to as technical communicator, given the various mediums for communicating information to users.

While not all technical communicators can be polymaths, today's software **"tools are providing the facilities to produce content that is more than simply 'good enough' without a requirement for a specialized role"** (*Alan Houser, Group Wellesley*). For example, the Adobe® Technical Communication Suite provides users with an authoring toolkit with multichannel, multi-device publishing capabilities. This includes the creation and inclusion of images (Adobe Photoshop®), 3D objects, eLearning content creation (Adobe Captivate), and support for structured standards such as DITA (Adobe FrameMaker). Output to Adobe AIR® help (Adobe RoboHelp) includes facilities to allow users to add comments to topics which can be moderated as desired. In short, vendors are coming to market with a broader suite of tools to cater to the dynamic needs of the organization and the varying skill sets of its technical communicators.

## Trend #10: Improved Time to Market through Automated Processes and Effective Collaboration Facilities

Customers are increasingly expecting documentation to be updated quickly, particularly when it is available online. **"There is big demand for automation and collaboration in a structured way"** (*Rick Quatro, Carmen Publishing Inc.*). Through single sourcing, automated workflows and efficient collaboration, the time required to deliver updates are significantly reduced.

Through single sourcing, the editing of content can be reduced to a single instance helping to significantly reduce time consuming (and expensive) editing processes across multiple iterations of similar documents. Automated processes can then be used to assemble various deliverables from single or multiple sources (database tables, content management systems, mainframe, flat files, etc.), while transformations are carried out mechanically through preferred tools. For example, Adobe FrameMaker Server integrates with Windows Task Scheduler and provides scripting facilities for automation. Customers can automate publishing and post publish commands to rename, move, and archive output files so subsequent builds do not overwrite earlier output files.

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In addition to the automation of build processes, the implementation of workflow processes can help improve efficiency with respect to peer review and external subject matter consultation. More than automating the delivery and notification of materials that need to be reviewed, efficient collaboration processes need to simplify the incorporation of review comments from a multitude of sources.

Tools such as Adobe FrameMaker support output to PDF for Review—including Reader Extensions—to allow reviewers to use the free Acrobat Reader (i.e., Adobe Acrobat® Pro is not required) to comment within material for review. Comments from multiple parties (reviewers can even see each other's comments) are imported back into FrameMaker allowing authors to accept and reject comments and edits similar in concept to Microsoft Word's reviewer tools. With continued advances in the tool sets available to technical communicators, concerns for Time to Market and TCO will continue to improve.

## Commenting on "The Cloud"...

Despite increasing hype around the "Cloud" (more traditionally the Internet), there does not currently appear to be a significant interest in Web based tools for the document creation process. While simple tools are available, technical communicators are sticking with the more advanced desktop tools. Anecdotally, users may not be asking for cloud based services simply because they are so readily available; people simply go and use them (e.g., Google Docs, DocZone, DITAweb). However, there has been some interest expressed around using cloud services to facilitate the collaborative process with individuals outside the organization.

Security around intellectual property and trade secrets continues to be one of the most forward concerns of larger organizations. With the financial resources to facilitate in-house datacenters and the advancements in server virtualization to dynamically meet ongoing computing requirements (i.e., private compute clouds), there is little motivation to move document creation and storage outside the organization. Conversely however, the smallest organizations may be required to outsource technical communication processes or consult external subject matter experts. Similarly, freelancers are looking for more efficient ways of collaborating with these small business clients.



Smaller bootstrap organizations appreciate the financial benefits that hosted solutions can provide. These web based software solutions represent low barriers to entry, minimal upfront costs, and zero maintenance requirements. Through web based input, technical communicators can also minimize the efforts required by subject matter experts while still being able to compile documents in a coherent form.

Tools such as Adobe FrameMaker and Adobe Captivate can support a collaborative review process through the free acrobat.com service. While this cloud based solution may be popular for distributed users, Adobe FrameMaker also provides the option to share review documents internally through network shares, web folders, or Microsoft SharePoint, where document access can be tracked. Documents need never leave the internal network.

## In Closing

The advancement of tools continue to hide the complexities around XML and structured document creation, subsequently lowering the barriers to entry and increasing the number of citizen journalists without a degree. Technical writing is becoming increasingly commoditized and more easily outsourced as part of cost cutting strategies by global organizations. The implementation of structured document practices, to varying degrees, also provides the foundation for a number of other trends such as single sourcing, multichannel delivery, and other content reuse.

The explosion of social media and collaboration, and **“the expanding role of the technical communicator provides an opportunity for technical writers to become a more integral part of product development in order to positively affect the corporate bottom line” (Jack Molisani, The LavaCon Conference)**. With near real-time feedback, the creation of documentation needs to be done more proactively, listening to users and incorporating their thoughts as opposed to simply being reactive. In some respects, technical communicators are becoming user advocates, quickly providing content perceived to be the most valuable to customers based on reportable metrics, in an automated fashion.

While organizational structures vary based on size, industry and specialization, there is no delimiting factor for which trends vendors are adopting. Available tools, such as those within the Adobe Technical Communication Suite, continue to advance in addressing the evolving needs of this highly dynamic and evolving sector and provide added flexibility for those that work with in it.





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