Technical Publication Development Process

We use a development process with ten phases to create help systems, user guides, installation guides, quick start guides, quick reference guides, and reference manuals.

Development Process

The ten phases in our technical publication development process are:
- Phase 1: Assess Needs
- Phase 2: Plan
- Phase 3: Acquire Information
- Phase 4: Organize Content
- Phase 5: Design the Look & Feel
- Phase 6: Write
- Phase 7: Illustrate
- Phase 8: Review & Revise
- Phase 9: Test
- Phase 10: Publish

The phases are iterative. For example, review comments during Phase 8 usually send the process back to Phases 6 and 7. But a comment may also point out the need for additional information, which sends the process back to Phase 3. A comment may even suggest a new goal, audience, or strategy, which sends the process back to Phase 1. Every time we return to an earlier phase, we check each of the following phases. A new goal, for example, may require an adjustment to the project plan in Phase 2.

Phase 1: Assess Needs

In Phase 1, we analyze the need for a technical publication. To do this, we create a needs assessment that describes the:
- Goals that the publication should achieve
- Audience that must use the publication for it to achieve its goals
- Strategies to achieve the goals with the audience

The needs assessment is critical because it drives all content decisions throughout the project.

People who develop technical publications sometimes think they know the goals and the audience, and they skip the needs assessment. That is a mistake. Sometimes it is a disastrous mistake.

We always define the goals of a technical publication. One of the goals of a help system is likely to be helping users work with the product. But where do customers need the help most? Are customers not using some of the product's functions because they are difficult to learn? The goals may include eliminating those problems. Maybe the goals include reducing the overall cost of training or eliminating certain types of product support calls.

Are there other goals besides helping customers to use the product? For example, will prospective customers examine the help system before they make a decision to purchase the product? If so, one of the goals may be helping to sell the product.

We analyze the audience for the technical publication in detail to make sure we understand the characteristics of each different type of audience member. This information helps us determine the best way to organize and present the content. It also helps us understand the typical ways in which members of the audience acquire knowledge. There is no point to developing a technical publication if the audience won't use it.

The audience analysis drives major content decisions such as what information to include, how to organize the information, and how technical to make definitions of terms, explanations of concepts, and illustrations.

After we define the goals and analyze the audience, we develop strategies to achieve those goals with the audience. We pay particular attention to potential problems, such as difficulties the audience may have understanding the subject matter and audience reluctance to use technical publications.

Next we define strategies that will help us overcome the problems. Different strategies are required for audiences that devour information, browse it, or ignore it.

Phase 2: Plan

In Phase 2, we create a project plan. It specifies:
- Processes and related publications
- Delivery media
- Project team
- Production tools
- Estimated costs
- Development schedule

We may complete portions of Phase 2 prior to starting the project. For example, if we provide a fixed bid, we estimate costs while preparing the bid. We also prepare a preliminary development schedule.

User guides, help systems, and other technical publications may be part of a product release process that includes training and product support. Knowing how the pieces of the process fit together helps us design cost-effective technical publications.

Delivery media include help systems integrated with or separate from the applications they explain, HTML pages on a website, electronic documents downloaded from a website or distributed on optical media, and print documents.

The project team usually includes a project manager, subject matter experts, a technical writer, a graphic designer, and an illustrator. Multimedia projects require team members with multimedia skills.

The choice of tools can have a major impact on productivity. We keep track of the latest advances in publishing tools and content creation techniques.

Phase 3: Acquire Information

In Phase 3, we gather information and analyze it to understand how all the ideas relate to each other. The techniques we use include:
- Interviewing
- Brainstorming
- General analysis
- Function and process analysis
- Concept mapping

Before we conduct interviews, we develop questions based on our analysis of project goals, audience, and strategies as well as reviews of technical documents and hands-on product analysis. Obtaining answers to our initial questions gives us the knowledge we need to ask detailed questions.

We analyze product functions and processes to make sure we understand not only how the functions work but also how users perform tasks using those functions. We learn as we interview and analyze, keeping training time to a minimum.

Concept mapping is a technique for exploring the relationships between ideas that we acquire during interviewing, brainstorming, and analysis. Because concept mapping encourages creative thinking, it is especially helpful when we develop technical overviews and explain important concepts.

Phase 4: Organize Content

In Phase 4, we organize the content to achieve the technical publication's goals with its audience. We use two basic tools: outline and prototype.

The outline shapes the information we gathered and analyzed in Phase 3 into logical, well-balanced groups of topics that provide a solid framework to support individual concepts, tasks, and examples.

The organization of a technical publication's content is like the framework of a building. The organization supports the content, connecting concepts, tasks, and examples to each other.

If content is not attached to an effective framework, the technical publication will be ineffective no matter how cleverly the publication's medium is designed or how well the text is written.

We develop a prototype of a technical publication to show the organization and presentation of the information as well as the ways in which users can access the information. The prototype lets us fine-tune the organization as we develop the content.

Phase 5: Design the Look & Feel

In Phase 5, we design the technical publication's look and feel to achieve its goals with its audience. Phase 5 overlaps with Phase 4. As we develop the prototype, we design the look & feel.

We base the design on knowledge of the audience and how they are likely to use the publication. We create open, inviting designs with lots of white space. "Technical" should not mean "painful to read." Nothing is more lethal to learning difficult concepts and following complicated instructions than a sea of cramped text with dwarf margins.

Phase 6: Write

In Phase 6, we write the content of the technical publication. As we write, we identify opportunities for illustration (Phase 7).

Writing is an iterative process. After we write and review each draft, we conduct more interviews, we acquire more information, we make sure that the organization accommodates the new information (if it doesn't, we improve the organization), and we write the new content.

Here are a few of the many techniques we use:

• Write to the audience's knowledge level (not the writer's or the subject matter expert's).

• Provide overviews of important concepts. We explain *why* as well as *how.* Tasks are easier to perform when the reason for doing them is clear.

• Choose one name for each concept. If we are writing about a "file processing module," we don't also call it a "file processing engine" and a "file processing manager." The audience will think we are talking about three different things!

• Choose one definition for each concept and stick to it. If we can't define a concept clearly, we can't expect our audience to understand it clearly.

• Write clear, step-by-step tasks. We make sure tasks are easy to find and easy to follow.

• Provide tutorial examples. People often learn faster by modifying an example than by creating something from scratch.

• Develop a comprehensive index. We don't wait until the end of the project. An excellent way to test an index is to use it while writing the drafts.

Phase 7: Illustrate

In Phase 7, we create illustrations that convey important information visually. Phases 6 and 7 usually occur together. Illustration needs are easy to identify while writing, and there is plenty of time to make sure the illustrations are effective. We use:

- Line drawings and photographs to show assembly instructions and product usage (line drawings are often better at highlighting important details)
- Sample screens and reports to show product capabilities and to clarify tasks
- Flow charts to show processes
- Charts to show data

We make sure that technical publications illustrate concepts and tasks that users must understand. Software screen samples and photographs of hardware are no substitute for clear visual explanations.

Phase 8: Review & Revise

In Phase 8, we circulate drafts of the technical publication for review, and we make revisions. We focus on ideas and organization in early drafts. Reviews of early drafts result in more interviews, analysis, organization, writing, and illustrating. We focus on writing style in later drafts. Reviews of later drafts result in fine-tuning the writing and illustrations.

Phase 9: Test

In Phase 9, we test the technical publication with its audience. Usability testing, which can be simple or elaborate according to a project's needs and budget, validates that users at all skill levels can perform the tasks required to achieve the publication's goals.

Usability testing is no substitute for good design and organization, but testing a well-designed and well-organized technical publication will identify difficult concepts, unclear tasks, navigational problems, and topics that are clear when read slowly but confusing when read – as many users do – quickly.

Phase 10: Publish

In Phase 10, we publish the technical publication:
- We provide production-ready releases of help systems and other electronic technical publications.
- We work with printers and other publishing services to ensure high quality at competitive cost.

By continually monitoring industry developments in technical communication, we take advantage of the latest advances in publishing tools and production techniques. This lets us produce technical publications that are attractive, easy to read, and economical, regardless of whether they are displayed on a computer monitor, duplicated at a copy center, or printed on a high-resolution color press.

Why the Development Process is Important

Writing too soon without spending enough time assessing needs, planning, acquiring information, and organizing content is a sure recipe for failure. Technical publications should pay their own way or – better yet – make a major contribution to profitability. See our "Cut Costs and Build Sales!" web page for information about setting goals that enable technical publications to improve profitability: www.ImpactOnTheNet.com/results.html

About Impact Technical Publications

Impact Technical Publications, founded in 1990, is a technical and marketing communication consulting company that helps clients create the knowledge they need to develop, market, install, and support technical products and services.