GUIDE TO
TECHNICAL WRITING

BY INSTRUCTIONAL SOLUTIONS

WELCOME

Our company is based on a core belief: clear business writing is a huge competitive advantage. It is the currency that conveys a company's products and knowledge, and the primary connection with customers.

View our client list, read some client testimonials, and see how we can improve technical writing for you or your organization.

CONTENTS

Technical writing is a rare but highly sought-after skill. Whether you're an admin or an executive, there is always a demand for technical writing, so we've created this Guide to Technical Writing for you and your team to develop a stronger technical writing foundation.

GET STARTED WITH TECHNICAL WRITING

Technical writing is a valuable skill with significant job opportunities. According to the [Bureau of Labor Statistics](#), there will be a 12% employment growth for technical writers between 2020 and 2030. According to [Salary.com](#), the average salary for a Senior Technical Writer ranges from $80,800 to $98,200, with an average base salary of $89,200.

Maybe you are an engineer or scientist who needs to communicate your technical knowledge. Or maybe you want to become a full-time technical writer for a company. Whatever the case, strengthening your technical writing skills is a worthwhile endeavor.

Below is a complete guide to technical writing — from a clear technical writing definition to tips on how to improve your technical writing skills.

WHAT IS TECHNICAL WRITING?

Technical writing is the practice of documenting processes, such as software manuals or instructional materials. Traditionally, it was limited to user manuals of some sort.

However, today's definition is more nuanced than that. No longer bound to lengthy user manuals, technical writing is the art of documenting and explaining complex technical information unambiguously.

It includes:

- reports
- executive summary statements
- briefs
- technical emails
- press releases
- policies and procedures

This type of writing is often found in industries such as high-tech manufacturing, engineering, biotech, energy, aerospace, finance, IT, and global supply chain. At the end of the day, you are most likely performing technical writing if you work in a technical field.

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PURPOSE OF TECHNICAL WRITING

The purpose of technical writing is to break down complex ideas and information into easy-to-understand tasks or explanations for the reader. This straightforward writing style clearly informs the reader on a topic (even if they are a non-technical audience or have a lower knowledge level).

Based on this purpose, technical writers must closely examine their target audience's mindset and knowledge levels. They also must understand what the reader hopes to glean from the technical document. When writing, follow the adage of "explain it to me like I'm five."

Your audience might fall into one or more of the following groups:

Experts

As the title denotes, this group has deep knowledge of the subject matter, product, or service; however, they need to know more. They are looking for info about a special topic. A good example is a doctor who reads a medical research paper to learn about a new type of cancer treatment.

Technicians

These are the builders of the product. They construct or operate the product at hand. Technicians are viewed as the experts in their industries. The audience here may include a computer programmer or HVAC technician relying on a programming guide or repair manual to carry out their jobs.

Executives

This group handles the decision-making. Executives rely on the technical docs for the lowdown to move forward with a smart decision. They are often the funders of the product or program and need to remain current with key information. Corporate content may include stakeholder reports, business pitches, and proposals.

Non-specialists

This cohort may be the easiest to define. These are the laypeople and end-users. We have all been made privy to tech documentation in this category. It can range from marketing communications like websites and ads to product user manuals and handbooks. Because this audience is composed of non-experts, technical writers need to keep their language basic.

Improving your technical writing skills for any audience and document type helps you become a more effective communicator. You then add more value to your company and career. Want to learn more about the return on investment for better writing? Use our ROI calculator to estimate potential savings and the impact of better writing training at your organization!

CALCULATE THE TIME SAVINGS OF BETTER WRITING!

Assuming four participants are trained, annual time-saving benefits are $18,750

(assuming employees earn $50,000 and write for four hours daily)

Calculate your own ROI

10 TYPES OF TECHNICAL WRITING

Once you understand your audience, you can break down technical documentation into three categories: end-user documentation, traditional technical writing, and technical marketing communications.

Underneath these three categories, technical documents or technical communications take many forms. Here are 10 common types:

1. **User guides/user manuals**
2. **Statements of work**
3. **Policies**
4. **Standard operating procedures**
5. **A technical email sent to a colleague**
6. **Reports**
7. **Specifications**
8. **Bid documents**
9. **Marketing collateral**
10. **API documentation**

Read a full breakdown of each type in our full online guide >>

TECHNICAL WRITING VS. BUSINESS WRITING

Technical writing and business writing are often used interchangeably but are not the same thing. In short, technical writing = neutral instruction. Business writing = clearly conveying both information and intent.

Granted, these two techniques are similar. They require concise language and specific word choices. Both styles often use bulleted or numbered lists to clearly present info.

But one is not interchangeable with the other. Business writing ranges from interpersonal to information to technical content. Technical writing overlaps with business writing when a business person needs to convey technical information.

Another key difference is the tone toward the target audience. For example, you may use a direct formal tone for an internal memo. Or you might use a professional but warm tone for an email to a new client. You must write clearly and the message should be accessible, but the tone changes based on the audience.

Technical writing rarely changes tone because it aims to clearly and effectively explain something. You're not trying to persuade the reader to do something or develop a relationship. You're using language to communicate instructions to the target audience effectively.

Tone is the key difference.

VIEW ALL TECHNICAL WRITING COURSES FOR GROUPS AND INDIVIDUALS >>

FOLLOW A TECHNICAL WRITING PROCESS

Step #1: Plan to plan ahead

Planning is the critical first step in creating a technical document (hint: it should take up 50% of your document creation time). Before you ever start writing, cover the who, what, when, where, and why of the doc:

WHO
Understand your target audience. This dictates the content you create. Who is your reader? What are their needs? Think carefully about whom you are directing this writing piece.

WHAT
Why are you writing it? What is the goal of this document? The purpose(s) depends on the document type (e.g., user manual/ instruction manual/user guide).

WHEN
Write down when the project is due. Check-in with the design and publishing group to ensure that you meet their production schedule. You will need to set up a timeline for review, QA, and creativity.

WHERE
Where is this document to be published? How will the document be distributed to your readers? What style guide should you follow? This will impact your sentence structure and formatting.

WHY
This is the reason this technical writing piece is being compiled. Why is the stakeholder requesting that this document be put together in the first place? From a business standpoint, why is this request being made? Your business leaders might not be the final audience, but their reason for you writing the doc will impact the tone, content, etc.
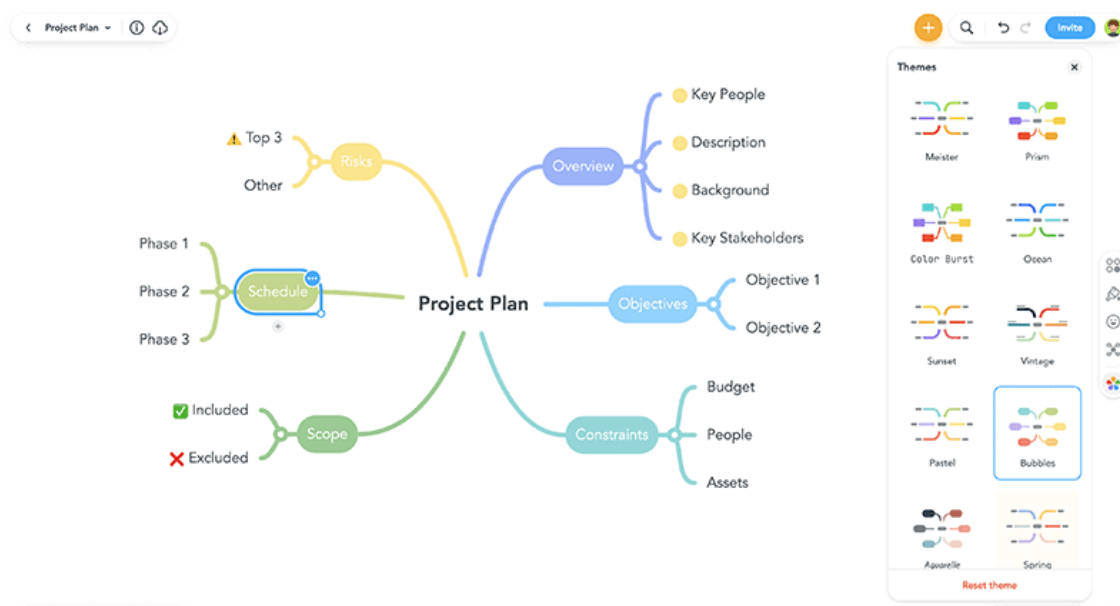
Step #2: Create an outline or concept map

Map out the content of your document before you begin to write. We recommend creating an outline or concept map to see content and structure and verify these elements before drafting.

OUTLINE

Think of outlining as the blueprint for your technical document. You wouldn't build a house without a pre-plan, would you? An outline helps you to organize your message. Start simple: Introduction, Body, and Conclusion. Weave in your research throughout..

CONCEPT MAP

For technical outputs, outlining works well. For cross-functional and complex documents, mapping can be more effective. Outlining and mapping are similar, but mapping is less linear.

Mapping is a research-based method centered on audience needs and the purpose of the information being presented. Check out this tool for collaborative mapping.

The end goal for both outlining and concept mapping is coherent writing. Try one out and see which works best for you.

Step #3: Start drafting

Once you have your plan, you're ready to write. Choose a quiet place free of distractions. Follow your outline or concept map. You don't have to start at the top of the document. Choose a section that's easier and fill it in with content.

Continue writing until the document is complete (hint: avoid editing while writing - wait on this step). If you have a solid plan, the writing part should be simple.

Step #4: Edit, edit, edit

Time to edit your technical document to ensure that there are no mistakes.

· Are the technical concepts easy to understand?
· Did you include helpful visuals or graphics?
· Are you using good grammar from beginning to end?

Also, ask for input from colleagues. For clear sentences, we recommend running your content through the Hemingway Editor. For grammar and spell check, we recommend using Grammarly.

Receive instructor feedback on your technical writing from an expert.

View the Course Outline

5 STRONG TECHNICAL WRITING EXAMPLES

Need some inspiration for your technical documents? Here are five strong technical writing examples to help you write different types of technical content effectively.

Click on any document below to view the full writing example.
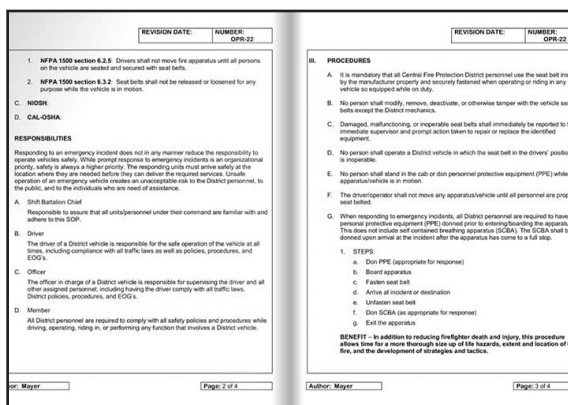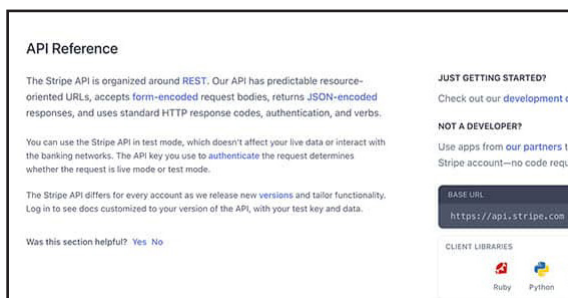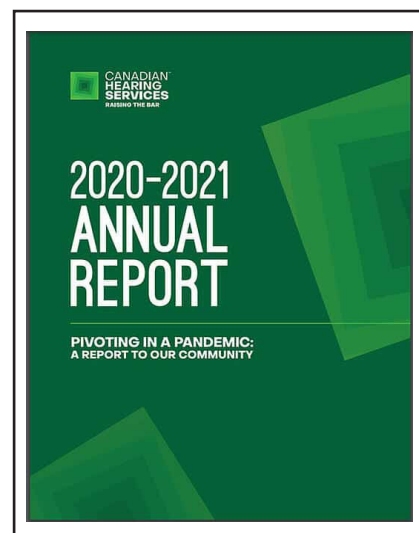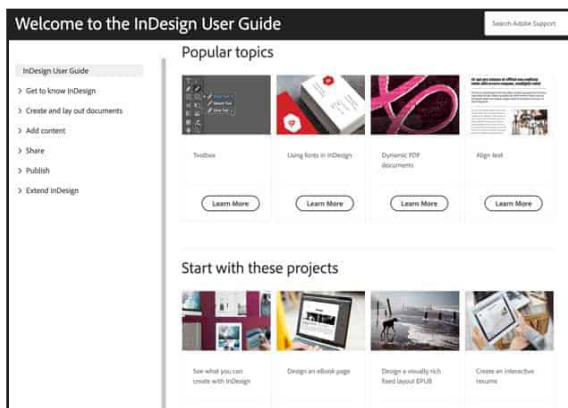
10 BAD TECHNICAL WRITING EXAMPLES

Not all technical documents are well-done. Have you ever read an instruction manual that was so confusing you couldn't put the product together? Or maybe you've seen a diagram in a handbook that was more hindering than helpful.

Below is a list of the top ten bad technical writing examples and how to fix each common mistake in technical documentation.

1. Indecipherable titles

A title is an opportunity to persuade your reader to read the entire document. Here's an example of a poor title:

> *The All-inclusive and Thoroughly Vetted Interdepartmental and Multi-functional Manual Pertaining to Optimal Performance of The Richards 37 of the Modular 3.3abx Series.*

Keep your title concise and use plain, simple language. In this case, "*The Richards-37 User Manual*" would suffice.

2. Glaringly incorrect, absent, or poor-quality images

Visuals are one way to guide your reader through a complex concept. If a document is missing images or the images are fuzzy or poor quality, the reader is going to be frustrated and confused.

Display modern and matching photos and images. Also, ensure that images are properly labeled.

3. Confusing substance

As a subject-matter expert, it's sometimes easy to use confusing language. But remember that technical documents are typically for readers who don't know about the topic.

Avoid writing hard-to-understand content that's hazy in vocabulary, word order, or descriptions. Consider your audience's needs and make sure that your writing is direct, accurate, clear, and simple. If unsure of a sentence or instruction, run it by a non-expert. Use layman's terms.

4. Circular cross-reference

Circular cross-reference is when you reference a point of instruction in a doc, only to find that the last object references the first object, creating a closed loop.

It's never fun to have to dig around for the instructions. Assume the perspective of a non-expert and avoid this tactic.

5. No table of contents or index

A table of contents or index makes it easy for a reader to find a specific section in a document. They also orient the reader. Without one or the other, the reader must painstakingly read or scan a document page-by-page.

6. Jargon overload

While industry words and acronyms might be understandable for you, the average reader probably won't understand what you're talking about.

Be aware of the terms that you use. As a general rule, avoid jargon. Acronyms are typically a "heads up" flag that calls for defining. It's a good practice to spell out the acronym in parentheses the first time you use it. After that, use the acronym.

7. Poor punctuation

For obvious reasons, bad grammar, spelling mistakes, typos, and missing or incorrect punctuation should be avoided. These mistakes can hurt reader comprehension. They also don't look professional. Use grammar and spell check tools like Grammarly to catch any errors.

8. Inconsistency in tone

The tone in technical writing should always be neutral and competent. Especially for collaborative documents, inconsistent tone can be a problem in technical docs. The tone might switch from direct to conversational.

The primary author should set the tone for the entire piece. They will need to re-write portions of the text according to a single, established dominant tone that is evident throughout.

9. Overly focused on the formal

Using overly formal language can be an immediate turnoff for your reader as it sounds arrogant. Be sure to write at the level of your readers.

This is a fantastic [readability tool](#) to help with the effort.

10. Unclear antecedents

An unclear antecedent is when a sentence does not identify to which noun a subsequent pronoun refers. It is burdensome in technical writing when the reader must comprehend every point.
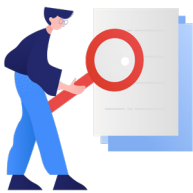
[Grammarly](#) should help you catch this common error.

7 TIPS FOR EFFECTIVE TECHNICAL DOCUMENTATION
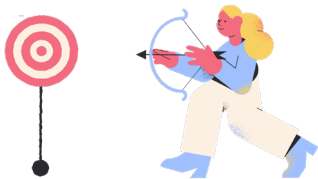
1. Be specific and accurate

Technical writing is often used to map out complicated processes. If a step or detail is omitted or vague, your document could cause major damage. Nothing matters more in technical documentation than accuracy and specificity.

2. Review your company's technical documents

Spend some time looking at the technical documentation put out by your company. What kind of documentation is it? Who is the audience for each document, and what is their knowledge level? This process will get you out of your own head (which is full of content knowledge) and into the mind of your potentially very varied readers.

3. Follow a style guide

Look into the style manuals or writing conventions of your company. Do they use another writing style manual or have their own? Is there a set of writing rules? This process is going to help you start thinking about technical writing in a way that fits your company.
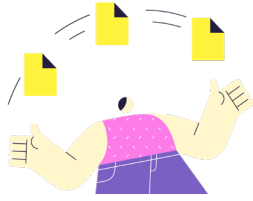
4. Focus on organization and sequence

Your technical document's framework is almost as important as the information itself; Without coherent organization and sequencing, none of your details, clear examples, photos, etc., will be helpful to your reader.
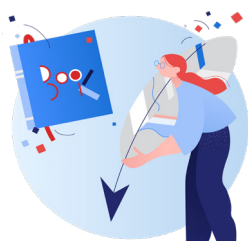
Create your document framework by following these two steps:

- **Categorization.** Break up your document into logical sections.
- **Sequencing.** The right sequence depends on the type of document.

5. Use active voice

The active voice is easier to read and understand than the passive voice. Whenever possible, choose the active voice in your sentences.

6. Ensure clear formatting

The style of the technical document carries over to the formatting stage. The formatting should be clean and professional. Well-chosen, readable fonts, sizing, and layout will assist the reader in understanding the text.

Make the content easily digestible for the reader. Break up chunky paragraphs (over seven lines) with paragraph breaks.

7. Implement a review process

Ensure that your technical document is reviewed by others when your personal review is complete. The reviewer could be a peer, a supervisor, or a subject matter expert. Each review will refine and improve the document.

This review process is also valuable to you as a technical writer. External feedback will improve not only the current text but also your writing in the future.

How to choose a technical writing course for groups.

Download the Group Guide
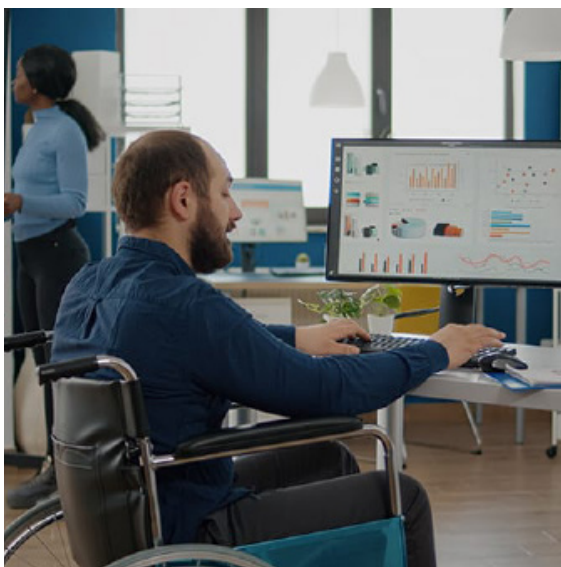
How to choose a course for individuals.

Download the Individual Guide

SUMMARY

Technical writing is a highly profitable skill — whether you're making a career shift to a technical field or adding this ability to your current role. Any employee who can convey technical information at work is very valuable to a company. Investing time and money to hone your technical writing craft benefits you and your career in the long term.

Get in-depth writing training with Instructional Solutions. We have been delivering online business writing courses since 1998, following optimal online and adult learning principles. Click here to learn more.

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Enroll in a course created with your unique writing requirements in mind.

Instructional Solutions is a business writing company with an online learning management system and instructors available worldwide.

Our company is based on a core belief: clear business writing is a huge competitive advantage. It is the currency that conveys a company's products and knowledge, and the primary connection with customers.

Business writing brings great value to those who are good at it. Our goal is to help our clients be the best at it.

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