

## Order of Information

In Technical Writing across Disciplines, we strive to create reader-based documents (i.e., documents written and designed with the reader's comfort in mind). Both audience and purpose affect how information is presented to a reader. Therefore, you need to organize the information in ways that make sense to the reader. Therefore you need to establish and maintain a clear organization within the given sections; it is up to you to decide how to lead the reader through the material.

**Goal:** To make the information clear and accessible to readers by providing

- Content Cues (guide the reader through the information you are providing)
- Format Cues (guide the reader through the physical design of the document)

**NOTE:** It is the responsibility of the writer to make the organization and meaning clear to the reader. It is not the reader's responsibility to figure out what the author means.

**Organization, then, begins with a conception of the rhetorical situation, which includes audience, purpose, and situation:**

- Who is your audience? What do you know about this reader? What assumptions are you making that affect how you present the information?
- What are your reader expectations?
  - The audience for technical documents is not reading for pleasure.
  - They're reading to understand the material and make decisions based on what they read.
- What is the purpose of the document? (Informational? instructional? persuasive?)

### Main Characteristics of Organizing Information

- The main idea is stated up front. Effective documents tell readers what the document's main point is and why it is important. Doing so creates a context for readers to understand the details that follow.
- The introduction contains a roadmap. Once readers understand your purpose for writing, they expect you to lead them in specific directions. You need to briefly indicate how the information is organized. This process orients the reader to the contents ahead.
- There are signposts and reader cues (content and format cues) along the way. You need to provide signals, including signposts (a prose statement or phrase that tells readers where the writer is leading them next) and reader cues (design element such as bullets or indentation that tells readers how to understand certain information).

### The Techniques of Subdividing

- Each subsection should have a good reason for standing alone. It should have integrity as a separate unit.
- Subsections should relate logically to the larger section. Subheadings should be clearly connected to the main section's heading.
- Check the subheadings themselves. They should be parallel in structure and should be informative enough to indicate the content of the sections.
- The order of the sections should make sense. Refer to the patterns in the next section.
- Check the number of subsections. Too many subsections cause the prose to look like an outline rather than a completed text; too few make the text look overly dense and forbidding to read.

## Common Patterns for Organizing Information

### Parts/Whole Organization

<i>Shows relationship between the whole (e.g., idea, object, or entire system) and parts of the whole</i>	This kind of organization involves <ul style="list-style-type: none"><li>▪ <b>Separating a single item into individual components</b></li><li>▪ <b>Identifying related types of an item</b></li><li>▪ <b>Identifying the broad category to which something belongs</b></li></ul>
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### Chronological Order

<p><i>Commonly describes events by presenting readers with material arranged by sequence or order of occurrence</i></p> <p><b>Examples:</b></p> <p><i>Accident Report:</i> describes the events in the order in which they occurred.</p> <p><i>Reference Manual:</i> explains how to carry out a task by describing the steps in sequence.</p>	<p>This kind of organization involves</p> <p><b>Providing signposts.</b> If the passage is more than a few hundred words long, use headings. Choose words such as step, phrase, stage, and part, and consider number them. Add descriptive phrases to focus readers' attention on the topic of the section. At the paragraph and sentence levels, transitional words such as then, next, first, and finally help readers following your discussion.</p> <p><b>Considering using graphics to complement the text.</b> Graphics can clarify and emphasize chronological passages. Flowcharts, in particular, help you emphasize chronological passages for all kinds of readers, from the most expert to the general reader.</p> <p><b>Analyzing events when appropriate.</b> Although chronology is an easy pattern to use, it doesn't explain why or how an event happened, or what it means. For instance, the largest section of an accident report is usually devoted to the chronological discussion, but the report is of little value unless it explains what caused the accident, who bears responsibility, and how such accidents can be prevented.</p>
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### Spatial Order

<p><i>Describes for readers the physical parts of nearly anything.</i></p> <p><b>Examples:</b></p> <p><i>Accident Report:</i> Describes the physical scene of the accident.</p> <p><i>Feasibility Study about building a facility:</i> Describes the property on which it would be built.</p> <p><i>Proposal to design a new microchip:</i> describes the layout of the new chip.</p>	<p>This kind of organization involves</p> <p><b>Providing signposts.</b> Help readers follow the argument by using words and phrases that indicate location (to the left, above, in the center) in headings, topic sentences, and support sentences.</p> <p><b>Considering using graphics to complement the text.</b> Diagrams, drawings, photographs, and maps help readers understand the spatial relationships.</p> <p><b>Analyzing events where appropriate.</b> A spatial arrangement doesn't explain itself; you still have to do the analysis: a diagram of the floor plan cannot explain why the floor plan is effective or ineffective.</p>
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## General to Specific

<p><i>Presents the reader with information according to a general understanding of a subject</i></p> <p><b>Examples:</b></p> <p><i>Report:</i> includes an executive summary—an overview for managers—before the body of the report</p> <p><i>Instructions:</i> provides general information about the necessary tools and materials and about safety measures before providing the step-by-step instructions.</p> <p><i>Memo:</i> presents the background information before going into the details.</p>	<p>This kind of organization involves</p> <p><b>Providing signposts.</b> In the introduction, explain that you will address general issues first and then move on to specific concerns. If appropriate, incorporate the words general and specific or other relevant terms in the major headings or at the start of the text for each item you are describing.</p> <p><b>Considering using graphics to complement the text.</b> Diagrams, drawings, photographs, and maps of varying detail help your reader understand the general or fine points of the information(See Markel Chapter 13 available on Blackboard).</p>
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## More Important to Less Important

<p><i>Presents the reader with information according to a the most important information first</i></p> <p><b>Examples:</b></p> <p><i>Accident Report:</i> describes the three most important factors that led to the accident before describing the less-important factors</p> <p><i>Feasibility study about building a facility:</i> presents the major reasons that the site is appropriate, then the minor reasons</p> <p><i>Proposal to design a new microchip:</i> describes the major applications for the new chip, then the minor applications.</p>	<p>This kind of organization involves</p> <p><b>Providing signposts.</b> Tell readers how the information is organized. For example, in the introduction of a proposal to design a new microchip, you might write, “The three applications for the new chip, each of which is discussed below, are arranged from most important to least important.”</p> <p>Be straightforward. If you have two very important points and three less important points, present them that way: group the two important points and label them, as in “Major Reasons to Retain our Current Management Structure.” Then present the less-important factors as “Other Reasons to Retain Our Current Management Structure.” Being straightforward makes the material easier to follow and enhances your credibility.</p> <p><b>Explaining why one point is more important than another.</b> Don’t just say that you will be arranging the items from more important to less important. Explain why the more important point is more important.</p> <p><b>Considering using graphics to complement the text.</b> Diagrams and numbered lists often help to suggest levels of importance (See Markel Chapter 13 available on Blackboard).</p>
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## Classification or Partition

*Assigns items to categories*

### Examples:

*Feasibility Study about building a facility:* classify sites into two categories: domestic and foreign

*College catalog:* classifies courses as required or elective

*Proposal:* partitions a detailed description of an instrument begin proposed for development

*Brochure:* describes how to operate product by describing each of its features

This kind of organization involves

**Choosing a basis of classification or partition that fits your audience and purpose.** If you are writing a warning about snakes for hikers in a particular state park, your basis of classification will probably be whether the snakes are poisonous. You will describe all the poisonous snakes, then all the nonpoisonous ones.

**Using only one basis of classification or partition at a time.** If you are classifying graphics programs according to their technology—paint programs and draw programs—do not include another basis of classification, such as cost.

**Avoiding overlap.** In classifying, make sure that no single item could logically be placed in more than one category. In partitioning, make sure that no listed component includes another listed component. Overlapping generally occurs when you change the basis of classification or the level at which you are partitioning a unit. In the following classification of bicycles, for instance, the writer introduces a new basis of classification that results in overlapping categories: mountain bikes, racing bikes, comfort bikes, and 10-speed bikes.

The first three items share a basis of classification: the type of bicycle. The fourth item has a different basis of classification: number of speeds. Adding the fourth item is illogical because a particular 10-speed bike could also be a mountain bike, a touring bike, or a racing bike.

**Being inclusive.** Include all the categories necessary to complete your basis of classification. For example, a partition of an automobile by major systems would be incomplete if it included the electrical, fuel, and drive systems but not the cooling system. If your purpose or audience required that you omit a category, tell your readers that you are doing so.

**Arranging the categories in a logical sequence.** Use a reasonable plan: chronology (first to last), spatial development (top to bottom), importance (most important to least important, and so on).

**Considering using graphics to complement the text.** Block diagrams are commonly used in classification passages; drawings and diagrams are often used in partition passages (See Markel Chapter 13 available on Blackboard).

## Problem-Methods-Solution

*Reflects the logic used in carrying out a project. The three components of this pattern are simple to identify:*

*Problem.* A description of what was not working (or not working as effectively as it should), or what opportunity exists for improving current processes.

*Method.* The procedure performed to confirm the analysis of the problem, solve the problem, or exploit the opportunity.

*Solution.* The statement of whether the analysis of the problem was correct, or of what was discovered or devised to solve the problem or capitalize on the opportunity.

### **Examples:**

*Accident Report:* describes the three most important factors that led to the accident before describing the less-important factors

*Report:* describe the problem that motivated the project, the methods you used to carry out the project, and the findings: the results, conclusions, and recommendations

*Proposal:* describes a problem in your business, how you plan to carry out your research, and how your deliverables (an item or a report) can help solve the problem

This kind of organization involves

**In describing the problem, be clear and specific.** Don't write, "our energy expenditures are getting out of hand." Instead, write that "the energy usage has increased 7 percent in the last year" and that "the utility costs have risen 11 percent." Then calculate the total increase in energy costs.

**In describing your methods, help your readers understand what you did and why you did it that way.**

Because most technical problems can be approached using several methods, you might need to justify your choices. Why, for example, did you use a t-test in calculating the statistics in an experiment? If you can't defend your choice, you might lose credibility.

**In describing the solution, don't overstate.** Avoid claims such as "this project will increase our market share from 7 percent to 10 percent within 12 months." Instead, be cautious: "This project promises to increase our market share from 7 percent to 10 percent or even 11 percent." This way, you won't be embarrassed if things don't turn out as well as you and hoped.

**Choosing a logical sequence.** The most common sequence is to start with the problem and conclude with the solution. However, different sequences work equally well as long as you provide a preliminary summary to give readers an overview and provide headings or some other design elements to help readers find the information they want.

**Considering using graphics to complement the text.**

Graphics, such as flowcharts, diagrams, and drawings, can clarify and emphasize problem-methods-solution passages (See Markel Chapter 13 available on Blackboard).

## Comparison/Contrast

*Tells readers about similarities and differences; presents the advantages and disadvantages*

### Examples:

*Memo:* compares and contrasts the credentials of three finalists for a job

*Report:* describes a legal challenge that your company faces, you compare and contrast several options for responding

*Proposal to design a new microchip:* compare and contrast two different strategies for designing the chip.

This kind of organization involves

### Establishing criteria for the comparison and contrast.

Choose criteria that are consistent with the needs of your audience.

### If appropriate, determining whether each criterion calls for a required characteristic or a desired characteristic.

This step applies only if you will be using the comparison and contrast pattern as part of a decision-making process.

### Evaluating each item according to the criteria you have established.

Draw your conclusion.

**Organizing the discussion.** Choose either the *whole-by-whole* or *part-by-part* pattern or some combination of the two. Then organize the second-level items.

### Considering using graphics to complement the text.

Graphics can clarify and emphasize comparison-and-contrast passages. Diagrams, drawings, and tables are common ways to provide such clarification and emphasis (See Markel Chapter 13 available on Blackboard).

## Cause/Effect

*Focuses on precipitating factors and results*

### Examples:

*Environmental impact statement:* argues that a proposed construction project would have three important effects on the ecosystem

*Report:* argues that a recommended solution would improve operations in two major ways

*Memo:* describes a new policy, then explains the anticipated effects the policy will have

This kind of organization involves

**Explaining your reasoning.** If your point is that the product was marketed poorly, use specific facts and figures—the low market budget, delays in beginning the marketing campaign, and so forth—that support your claim.

**Avoiding overstating your argument.** For instance, if you write that Steve Jobs, the founder of Apple, “created the computer revolution,” you are claiming too much. It is better to write that Steve Jobs “was one of the central players in creating the computer revolution.”

**Avoiding logical fallacies.** Logical fallacies, such as hasty generalizations or *post-hoc* reasoning, can also undermine your discussion.

### Considering using graphics to complement the text.

Graphics, such as flowcharts, organization chart, diagrams, and drawings, can clarify and emphasize cause-and-effect passages (See Markel Chapter 13 available on Blackboard).

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### Sources

Burnett, Rebecca. (2004). *Technical Communication*. 6<sup>th</sup> ed. Boston, MA: Thomson Wadsworth.

Markel, Michael. (2004). *Technical Communication*. 7<sup>th</sup> ed. New York: Bedford/St. Martin's.

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