Communication Skills
Unit 1
Basics of Technical Communication

Prof. Shreya Thakore

Introduction to the Basics of Technical Communication

- Technical communication is the process of making and sharing ideas and information in the workplace and the set of genres such as letters, emails, instructions, reports, proposals, websites, and blogs, which comprise the documents you write.
- The Society of Technical Communications (STC) defines technical communication as a broad field that includes any form of communication about technical or specialized topics, uses technology such as web pages or help files, or provides instruction about how to do something.
- If you write an email to your professor or supervisor, develop a presentation or report, design a sales flyer, or create a webpage, you are a technical communicator.

Examples of Technical Communication

- Examples of technical communication include user manuals, technical reports, scientific papers, engineering specifications, software documentation, and business proposals.

Objectives and Characteristics of Technical Communication

Objectives of Technical Communication:

Technical communication aims to communicate information clearly and concisely to help people do their jobs better. The objectives of technical communication include:

- ✓ Clarity and conciseness:

  Technical communication should be clear and easy to understand for the target audience.

- ✓ Audience analysis:

  Understanding the audience's needs, knowledge level, and expectations is important.

- ✓ Purpose:

  Technical communication can serve many purposes, including informing, instructing, persuading, or documenting.

- ✓ Document design:

  Effective technical communication often involves thoughtful document design.

- ✓ Training and Education:

  Technical communication is key for training and educating people, especially in technical and specialized fields.

- ✓ Well-structured:

  Technical writing should have a clear structure that allows readers to follow along easily.

Characteristics of Technical Communication:

1. **Focused on audience**:

Technical and workplace documents address a specific audience. The audience may be individuals or groups, and they may or may not be known to the writer. While a primary audience is always addressed, there may be a secondary one. Thus, an understanding of the reader or user of a technical document is important.

2. **Rhetorical, persuasive, purposeful, and problem-oriented**:

Technical communication is all about helping the reader or user of a document solve a problem or compel others to act. For example, the syllabus of your calculus class informs students what is expected of them; the university's website provides information to potential students and current students about educational, financial, and personal resources. Identification of a specific purpose and audience are the first two steps of technical writing.

3. **Professional**: Technical communication reflects the values, goals, and culture of the organization and as such, creates and maintains the public image of the organization.

4. **Design-centered**: Technical communication uses elements of document design such as visuals, graphics, typography, color, and spacing to make a document interesting, attractive, usable, and comprehensible. While some documents may be solely in print, many more use images such as charts, photographs, and illustrations to enhance readability and understanding and simplify complex information.

5. **Research and technology-oriented:** Workplace demands often require technical and workplace writing to be created in collaboration with others through a network of experts and designers. This teamwork depends on sound research practices to ensure that the information provided is correct, accurate, and complete.

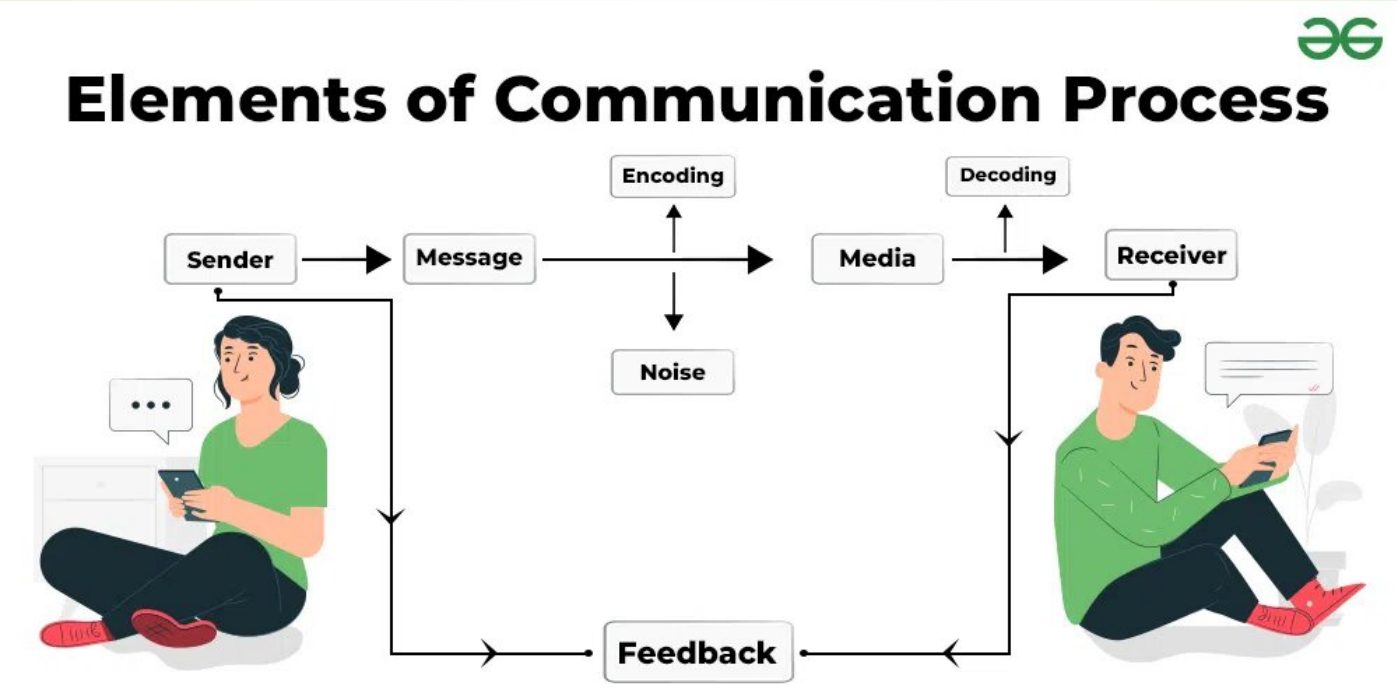
6. **Ethical**: Technical communication is ethical. All workplace writers have ethical obligations, many of which are closely linked to legal obligations that include liability laws, copyright laws, contract laws, and trademark laws.

7. **Socially just**: Finally, technical communication should consider social impact and perspective. Technical communicators have the opportunity to make information and knowledge accessible and understandable, and to choose not to do so is not only oppressive but also prevents unheard voices from taking our progress a step further.

8. **Accessible:** A foundational exigent for technical communication practices is to create access to information and instruction for all users. With the move to digital communication formats, technical communication practices have had the increased opportunity to consider the access needs of all users across the ability and identity spectrum.

Process of Communication

- The process of exchange of ideas, views, facts, feelings, etc., between two or more persons to reach a common understanding is known as Communication.



1. Sender

The person who conveys his thoughts, message or ideas to the receiver is known as the sender. He is at the starting point of the communication system and represents the source of communication. E.g., In a classroom, a teacher is a sender.

2. Message

The subject matter of communication is termed as messages. It includes ideas, feelings, suggestions, order, etc., which a sender wants to convey to the receiver.

3. Encoding

The process of converting messages into communication symbols, which may be understood by the receiver. It includes words, pictures, gestures, symbols, etc. Encoding translates the internal thought of the sender into a language that can be understandable.

4. Media

The path, channel, or medium through which an encoded message is transmitted to the receiver is known as media. It is the carrier of the message. It can be in written form, face to face, through telephone, letter, internet, etc.

5. Decoding

The process of translating the encoded message into an effective language, which can be understood by the receiver is known as decoding. In this, the encoded symbols of the sender are converted.

6. Receiver

The person who receives the message of the sender is known as the receiver. E.g., Students are receivers in the classroom.

7. Feedback

To complete the process of communication, feedback is essential. The process of reversal of communication in which the receiver expresses his reaction to the sender of the message is known as feedback. Feedback ensures that the receiver has received and understood the message.

8. Noise

Any construction or hindrance that hampers the communication process is known as noise. The hindrance may be caused to the sender, message, or receiver. It acts as a barrier to effective communication and because of this message is interpreted differently by the receiver. Disturbance in the telephone line, inattentive receiver, faulty decoding, poor internet connection, improper gestures and postures, etc., are some examples of noise.

Levels of Communication

- Human Communication takes place at various levels:

1. Extra Personal Communication
2. Intrapersonal Communication
3. Interpersonal Communication
4. Organizational Communication
5. Mass Communication

1. Extra Personal Communication:

- Extra personal communication is the way of communication in which a human interacts with other species or non-living objects.
- Communication between human beings and non-human entities is extra-personal communication.

- Examples:
  - Communication with animals/birds
  - Communication with plants
  - Communication with Robots/Machines
  - Talking to wall
  - Talking to God
  - Talking to mirror
  - Shouting at an inanimate objects like telephones while not working.

2. Intrapersonal Communication:

- The intrapersonal level of communication is the communication with the own self.
- It takes place within an individual.
- Intrapersonal communication is where a person sends a message and the same person receives it.
- Intrapersonal communication is a method of communication that helps every person to communicate with themselves.
- It helps in clarifying what is known as self–concept.
- It is an inward-looking process.
- It can also be understood as self-talk.
- It is an act of imagination and visualization and even recall and memory.

- Examples:- Thinking, Self-talk, Daydreaming, Communication between body parts, Making gestures while thinking.

3. Interpersonal Communication:

- Interpersonal communication is the communication by which people exchange information, feelings, and meaning through verbal and non-verbal messages.
- It is the sending and receiving of messages between two or more people.
- It can be formal and informal.
- Usually, it is purely oral communication.
- It is face-to-face communication.

- Examples:
  - Talking with friends and family members, writing an email, giving a presentation, chatting/calling, negotiating, facing an interview.

4. Organizational Communication:

- Organizational communication is the exchange of information, ideas, and views within and outside the organization.
- It is a formal and generally objective form of communication.

- Examples:
  - Letters, Email, Memo, Report, Meeting, Interview.

5. Mass Communication:

- Mass Communication is the communication with the large crowd.
- Mass communication is a process in which a person, a group, or an organization sends a message through a channel of communication to a large group of people and organizations.

- Examples:
  - News Papers, Press Conference, Media Interview, Films, Advertisements, Social Media.

Flow of Communication

- The **flow of Communication** is the pattern of how messages are sent, received, and processed among individuals or groups of people.
- It is an important aspect of communication that helps in understanding the flow of information within an organization or a group.
- The flow of communication can be categorized into three main types, namely upward communication, downward communication, and horizontal communication.

Upward communication:

Upward communication is information moving from lower levels of the hierarchy to higher levels. It is also known as bottom-up communication. This type of communication is essential for employees to provide feedback to their managers, supervisors, or higher authorities. Upward communication helps in identifying problems, grievances, and other issues that need to be addressed by the management.

Downward communication:

Downward communication is the opposite of upward communication. It is the process of information moving from higher levels of the hierarchy to lower levels. It is also known as top-down communication. This type of communication is essential for managers and supervisors to communicate policies, instructions, and other important information to their subordinates. Downward communication helps in maintaining consistency and clarity in the organization's goals and objectives.

Horizontal communication:

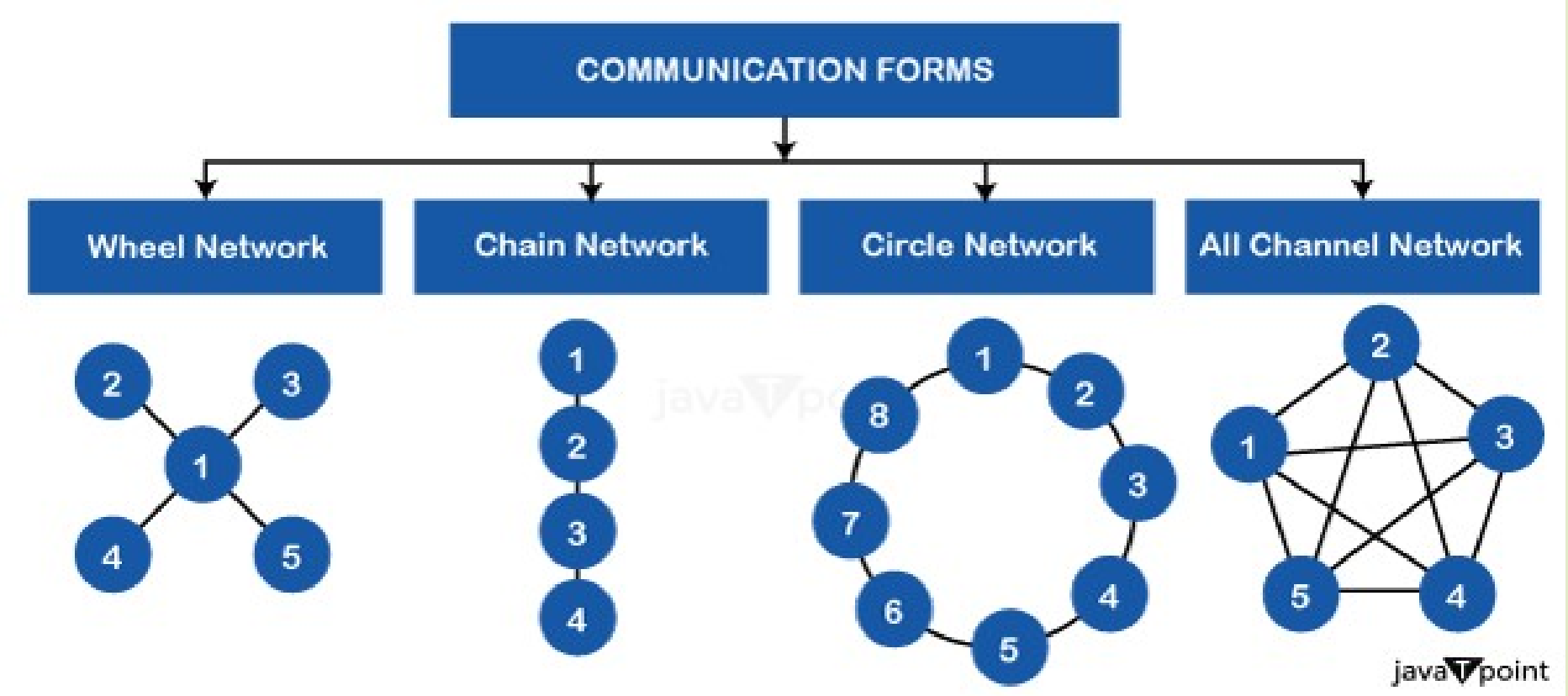
Horizontal communication is the process of information moving between people at the same level of the hierarchy. It is also known as lateral communication. This type of communication is essential for employees to collaborate, share information, and coordinate their activities with their colleagues. Horizontal communication helps in promoting teamwork, enhancing problem-solving skills, and improving overall productivity.

Communication Networks

- An organization can effectively communicate information by implementing a pattern or form called a communication network.
- The established system known as the communication network allows messages to flow within an organization in one or more directions, depending on the organization's needs.
- Various communication networks can be put into place based on their efficacy, depending on the kind of communication, the size and nature of the organization, and other factors.
- It is challenging to create an efficient communication network in large organizations.
- The primary communication network in these kinds of organization's is split into numerous smaller networks that remain connected to the main network to maximize efficiency.
- The communication network is useful in assessing the accuracy, speed, and smoothness of the messages that are sent throughout the organization.

Different Types of Communication Networks:

Communication networks can be classified into four categories: wheel, chain, circle, and all-channel networks.



1. **Wheel Connection:**

- ✓ The organization's leader serves as the focal point for gathering and sharing information among all members within the wheel communication network.
- ✓ Information in the wheel network comes from the top-level manager. He offers information both inside and outside the company. He informs subordinates within the organization and obtains the necessary data from them as well.
- ✓ It is faster and suitable for simple, routine types of work. It is, nonetheless, the most authoritarian kind of network.
- ✓ To summarize, a top-level manager in the wheel network is the information source; he gathers, produces, and distributes information to every organizational mechanism.

- **Examples of Wheel Network**

- **CEO and Department Heads:** In large organizations, the CEO frequently serves as the spokeswoman who communicates with the department heads, who function as the central hub. The department heads provide information, the CEO receives updates, and the CEO bases decisions on their advice.
- **Team Members and Project Manager:** The project manager acts as the focal point of the team, arranging and coordinating with them. While team members have little direct communication with one another, the project manager communicates, establishes objectives, and gets updates.

The wheel network works well in scenarios requiring precise guidance and command, like in hierarchical organizations or when a central authority figure is required. But when the central hub is absent, it might not be the best situation.

2. Star Network:

- ✓ A communication network structure called the "Star Network" is one in which a single person, usually a manager or supervisor, serves as the focal point for information sharing within the company.
- ✓ All channels of communication in this network go through the central hub, and other members speak with the hub directly instead of with one another.
- ✓ The hub serves as a primary point of contact, coordination, and decision-making.

- **Examples of Start Network**

- **Managers of departments:** Within an organization, department managers frequently serve as the main nodes in a star network. They coordinate smoothly within the department, assign tasks, give direction, and interact with their team members.
- **Executive Leadership:** As the main points of contact for major company-wide announcements, strategic goal communication, and department head feedback, executive leaders can play a pivotal role in larger organizations.

The star network helps with centralized control, effective information flow, and a clear chain of command in organizational communication. However, before putting into practice a star network structure, organizations should think about the nature of their communication needs and any potential trade-offs.

3. Chain Network:

- ✓ The chain network appears to be a hierarchical structure within an organization.
- ✓ It is the official chain of communication in its vertical, upward, and downward forms.
- ✓ A person can only communicate with his direct superior and subordinate in this communication network.
- ✓ Information about an organization is conveyed in this structure in a chain from the upper level to the lower levels, as well as from the lower levels to the higher levels.
- ✓ All organizations with a well-defined structure of authority and responsibility among their members are likely to have this kind of network.
- ✓ To put it briefly, a chain network is a vertical communication system where an individual can only speak with his direct supervisor and subordinate.

4. Circular Network:

- ✓ It is a circle network in a horizontal or sideways configuration.
- ✓ A user can converse with someone to his right or left in this network, but not with any other group member.
- ✓ There are more channels available on such a network.
- ✓ To put it briefly, a circle network is a horizontal communication system where a person can only speak with those who are directly to his or her right or left.
- ✓ For instance, during a meeting, a participant may speak with the person to his left or right.
- ✓ Similar to this, a production manager in an official organization would speak with the manager of marketing or finance to obtain official information.

5. All – Channel Network:

- ✓ All members of all channel networks can communicate with all other members without official limitations.
- ✓ It is a casual kind of networking where participants can freely share their thoughts, opinions, and recommendations.
- ✓ Members of this communication structure are free to communicate without limitations or boundaries.
- ✓ Information can be shared among group members with greater freedom.
- ✓ The group's leader does not have extraordinary authority over the other members of the group.
- ✓ As a result, the term "open communication network" applies to it.

6. Vertical Network:

- ✓ A vertical network is a network structure in which the majority of communication channels move up and down the organizational hierarchy.
- ✓ It highlights the official line of command and adheres to the reporting lines inside the organizational structure.
- ✓ Information is mainly shared between superiors and subordinates, or between subordinates and superiors, by the organizational hierarchy.

Examples of Vertical Network

- **Government Bureaucracies:** Vertical network structures are commonly used by government agencies and bureaucracies. As instructions and information move down the hierarchical levels, established policies and procedures are followed. 1
- **Conventional Corporate Structures:** Vertical network structures are frequently adopted by traditional hierarchical organizations, like multinational corporations. Executives communicate with middle managers, who relay that information to their own teams and staff members.

Importance of Communication Networks

Effective Information Flow

The effective and timely flow of information throughout the organization is guaranteed by communication networks. Clear channels and protocols allow messages to be sent promptly and accurately, giving staff members access to the data they require to carry out their jobs well.

Enhanced Cooperation

Teams and employees work together more when they use communication networks. To promote a culture of collaboration and synergy, they offer organized channels for exchanging concepts, expertise, and criticism.

Employee collaboration improves problem-solving, creativity, and productivity when there is smooth communication between team members.

Decreased uncertainty and misunderstanding

Minimizing ambiguity and misunderstanding is facilitated by clear communication networks. Organizations can guarantee accurate and thorough information transmission by clearly outlining roles and responsibilities and designating specific channels for communication. As a result, there is less chance of miscommunication, misunderstanding, and mistakes in tasks or projects.

Better worker satisfaction and engagement

More engagement and satisfaction among employees is a result of effective communication networks. Motivated, productive, and content with their work are more likely to be found in employees who feel informed, involved, and connected in the communication processes.

A thoughtfully constructed network promotes candid communication, involvement, and acknowledgment of staff members' work.

Conformity to corporate objectives

For team and individual efforts to be in line with organizational objectives, communication networks are ideal. They assist in ensuring that everyone is working towards the same goals by offering a clear framework for exchanging goals, objectives, and progress reports. Achieving goals is facilitated by this alignment, which also improves overall organizational effectiveness.

Visual Aids in Technical Communication

- Visuals can express ideas or convey information in ways that words sometimes can't.
- They help to make abstract concepts concrete for readers; therefore, as a technical communicator, it is vital to know how to use visuals to your advantage.
- Visuals can help readers see what something looks like without describing it in writing, such as photos, illustrations, and maps.
- Visuals can also effectively represent data, such as quantities or financial information, using visually pleasing and easy-to-understand tables, charts, and graphs.
- Technical communicators also use visual tools, such as flowcharts, Gantt charts, diagrams, and infographics, to help readers understand processes or relationships.

- The principles of good writing—clarity, conciseness, directness, etc.—are equally important to consider when using visuals.
- Much of what's been discussed so far about assessing audience and understanding purpose in writing also applies to using visuals.
- Clear visuals with appropriate context, such as introducing and discussing the visual, can help readers focus on key elements of your document, presentation, or website.
- Visuals without appropriate context run the risk of being overlooked or possibly misunderstood; even the best-looking visual will not help if your reader doesn't understand what it is or why it is there.

- **Choosing Visuals:**

- ✓ Technical writers use different language depending on their purpose, audience, and situation. The same holds for using visuals.
- ✓ EXAMPLE: An automobile owner's manual contains mostly simple language that most readers can understand; an automobile repair guide, on the other hand, has much more complex language aimed at an audience of specialists. You can think of using visuals in the same way: an automobile owner's manual would stick to simple diagrams that most people can grasp, while an automobile repair guide would use much more complicated visuals, such as schematics, based on its purpose and an audience of specialists.

- **Integrating Visuals:**

- ✓ Each style of visual has its conventions that you will recognize after you have seen enough of them. In addition, different publications have different style guides that dictate the specifics of how to format and integrate visual elements. In general, however, whenever you integrate any kind of visual, you should adhere to five key rules.
  - Give each visual a numbered caption and title
  - Refer to the caption number within the body text and discuss its content
  - Label all units (x and y axes, legends, column box heads, parts of diagrams, etc.)
  - Provide the source of the data and/or visual image if you did not create it yourself
  - Avoid distorting the data or image.
- ✓ In addition, visual elements should also be surrounded with sufficient passive space (or "white space") to emphasize the image and enhance its readability. If copying and pasting an image, make sure all elements are clear and the print size is readable. A visual that has been shrunk down to an unreadable size does not help the reader understand your ideas. If at all possible, try to orient the visual image in the same direction as the body text.

- **Guidelines for Integrating Visuals:**

- ✓ Make notes: As you research and write, note places in your draft where a visual might help readers better understand your data, ideas, or concepts; once your draft is complete, you can then return to these "markers" to help plan and inform the placement of your visuals. Some technical communicators will even create a rough sketch of their visual, while others simply jot down basic information about the visual. It's helpful, especially when preparing longer documents, to briefly note why you thought that a visual in a specific place might be helpful to readers—you can then re-evaluate your choices as you revise.
- ✓ Keep visuals relatively simple: include only the information needed for discussion or illustration; remove any unnecessary labels, boxes, and lines (as well as your notes if you used them).
- ✓ Position text horizontally: any explanatory text for the visual should be placed horizontally with adequate white space around the visual.

- ✓ Make sure that:
  - Units of measurement are specified,
  - Relative sizes are clear, and
  - Distances are explained or indicated where appropriate.
- ✓ Use consistent terminology and formatting for visual documentation: once you choose a format for integrating your visuals into your text, be sure to label them consistently throughout the report, so that readers become familiar with the layout and know what to expect.
- ✓ Define any abbreviations the first time you use them in the text and figures and tables.

- **Examples of Visuals:**
- ✓ The following are examples of the most common visuals used in technical communication:
  - Pie chart
  - Horizontal bar graph
  - Vertical bar graph
  - Line graph
  - Flowchart
  - Drawing/illustration
  - Photograph
  - The visual layout of a seating chart