- The *is–is not matrix* is a similar tool used to study problems. Compare them to see which would be better for your situation.

- The “How much or how many” question can be aimed at cost or time (how much) or resources (how many). Answers to those questions will be an upper limit on the benefits possible from improvements.

- The 5W1H structure has been around a long time. Journalists have always been taught that a good newspaper story must include who, what, when, where, why, and how. This tool adds an extra H.

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**flowchart**

Also called: process flowchart, process flow diagram

Variations: macro flowchart, top-down flowchart, detailed flowchart (also called process map, micro map, service map, or symbolic flowchart), deployment flowchart (also called down-across or cross-functional flowchart), several-leveled flowchart

See also: arrow diagram, SIPOC diagram, and work-flow diagram

**Description**

A flowchart is a picture of the separate steps of a process in sequential order. Elements that may be included are: sequence of actions, materials or services entering or leaving the process (inputs and outputs), decisions that must be made, people who become involved, time involved at each step, and/or process measurements. The process described can be anything: a manufacturing process, an administrative or service process, a project plan. Usually listed as one of the seven QC tools, this is a generic tool that can be adapted for a wide variety of purposes.

**When to Use**

- To develop understanding of how a process is done, or . . .
- To study a process for improvement, or . . .
- To communicate to others how a process is done, or . . .
- When better communication is needed between people involved with the same process, or . . .
• To document a process, or...
• When planning a project

Basic Procedure

Materials needed: sticky notes or cards, a large piece of flipchart paper or newsprint, marking pens.

1. Define the process to be diagrammed. Write it at the top of the work surface. Discuss and decide on the boundaries of your process: Where or when does the process start? Where or when does it end? Discuss and decide on the level of detail to be included in the diagram.

2. Brainstorm the activities that take place. Write each on a card or sticky note. Sequence is not important at this point, although thinking in sequence may help people remember all the steps.

3. Arrange the activities in proper sequence.

4. When all activities are included and everyone agrees that the sequence is correct, draw arrows to show the flow of the process.

5. Review the flowchart with others involved in the process (workers, supervisors, suppliers, customers) to see if they agree that the process is as drawn.

Several variations follow. Still other flowcharts are listed as separate tools because they can be used for different situations. See: arrow diagram, SIPOC, and work-flow diagram.

Considerations

• Don’t worry too much about drawing the flowchart the “right way.” The right way is the way that helps those involved understand the process.

• Identify and involve in the flowcharting process all key people who are involved with the process. This includes those who do the work in the process: suppliers, customers, and supervisors. Involve them in the actual flowcharting sessions by interviewing them before the sessions and/or by showing them the developing flowchart between work sessions and obtaining their feedback.

• Do not assign a “technical expert” to draw the flowchart. People who actually perform the process should construct the flowchart.

• Computer software is available for drawing flowcharts. Software is useful for drawing a neat final diagram, but the method given here works better for the messy initial stages of creating the flowchart.

• The facilitator’s role is to be sure all members participate, to ask the right questions to uncover all aspects of the process, and to help team members capture all their ideas in the language of the flowchart.
Keep all parts of the flowchart visible to everyone all the time. That is why flipchart or newsprint should be used rather than transparencies or a whiteboard.

Several sessions may be necessary. This allows members time to gather information or to reflect on the process. Even if the flowchart seems to be finished in one session, plan a review at a second session, to allow reflection time.

**macro flowchart**

Also called: high-level flowchart, high-level process map

**Description**

A macro flowchart shows only the major steps of the process.

**When to Use**

- When you need to understand or communicate a big-picture view of the major steps in a process, or . . .
- Before drawing a more detailed flowchart

**Procedure**

Follow the basic procedure above. At step 2, include only major activities.

**Example**

Figure 5.61 is a macro flowchart of an order-filling process. See the Medrad story on page 58 for another example of a macro flowchart.

**Considerations**

- If you have more than six or eight steps, consider whether you are including too much detail for a broad overview.

![Macro Flowchart Example](image)