How to Create a SIPOC Diagram

**Purpose:** The purpose of a SIPOC Diagram is to define and document the Suppliers, Inputs/Requirements, Key Process Steps, Outputs/Requirements, Customers, and Critical-to-Quality elements of a business process. Additionally, you should document the process name, owner, start/stop “triggers” or events, assumptions about the process, and operational definitions of key terms, process performance measures, or process actions/decisions.

**Materials:** Whiteboard to record inputs (or printed worksheets, flipcharts), SIPOC overview handout/PPT, posters – (1) Action Items, (2) Parking Lot, (3) Plus/Delta, (4) Class A Behaviors, (5) Well-Defined Process, (6) DMAIC process

**Time:** Varies. Plan for at least two hours based on the complexity of the process, the knowledge of the participants of the process, and their previous experience creating SIPOCs.

**Step ONE: CONDUCT AN OVERVIEW**

Provide participants a brief overview of the SIPOC process, purpose, tools/templates, and especially the “Keys to an Effective SIPOC.” Do this step even if working with a knowledgeable group to “level set” the group and review elements critical to conducting a successful SIPOC session.

**Step TWO: ESTABLISH THE FRAMEWORK**

Review the SIPOC framework on the whiteboard, worksheet, or flipchart.

- Process owner
- Process name
- Process start/cue/prompt/trigger/event
- Process end/cue/prompt/trigger/event
- Any known process assumptions/constraints
- Any known operational definitions of key process elements
- Feedback loops – how will you, your customer, your supplier communicate?
- Supplier – Input/Requirements – Process – Outputs/Requirements – Customer - CTQs

Use this review as a means of setting a positive tone with the group and developing a “conversational” style of facilitating the session. Remind the group that the assumptions and operational definitions are ongoing lists and may be added to as needed during the session. The idea is to make sure everyone is working on the same sheet of paper and means the same thing when using a term and that assumptions (“We can’t because of GMP”) are made visible, discussed, and validated or challenged as appropriate.

Be flexible and use THEIR words and terms. Write it down, and then ask open-ended, clarifying questions to get it right. Challenge the status quo, test their understanding of their own process, and encourage them to dialogue.

**NOTE:** Use the SIPOC PPT overview package. Refer group members to their handouts periodically. Encourage them to make notes, discuss, and ask questions. Your challenge from here on out in this process will be keeping the group at a high level of detail and not allowing them to get too granular. The detail can come later in the process flow diagram mapping or you can go back and break each key step into sub-steps and SIPOC them. It all depends on the purpose of the SIPOC and the complexity of the process.

**Step THREE: COMPLETE THE SIPOC CHART**

- List the 3-5 key steps in the process being mapped
- List the outputs of each step of the process
- List the requirements of each output (customer’s view)
- List the inputs into each step of the process
- List the requirements of each input (your view – the person doing the work)
- List the supplier of each input of the process
- List the Critical-to-Quality (CTQ) elements for the process

**NOTE:** Typically, you would record (1) the steps in the process, (2) the outputs/requirements, (3) the customers, (4) the inputs/requirements to the process, (5) the suppliers, and finally (7) the CTQs. However, groups sometimes prefer to be more “organic” than systematic. Be flexible and accommodate your audience as long as the entire SIPOC form is completed with enough detail to understand the process.

**Your job is to help them document their reality!**
Step Four: CHECK YOUR WORK

- Review the completed SIPOC
- Verify all key components are completed/addressed
- Review the “Keys to Success” and ask the group to check their work
- Determine Next Steps/Action Plan
- Conduct a Plus/Delta with the group on the session

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<th>Suppliers</th>
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<th>PROCESS</th>
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**Overview Learning Points**

- All work is a process...ALL processes can be improved
- The real value of a SIPOC is the conversations it inspires
- Begin with the end in mind – How will you USE this SIPOC?
- Define how things really get done, not how you might want them to be
- Make your process, assumptions, constraints, understanding, decision criteria visible
- Get it down on paper – THEN get it right!
- Use only as much detail as needed to understand/communicate effectively

**Keys to a Successful SIPOC**

- Clearly identify the **START** of your process (cue, prompt, trigger that requires you to act)
- Clearly identify the **END** of your process (how do you know you are done?)
- Make sure all **assumptions** are visible, discussed, validated, and documented
- Document the **operational definitions** of key terms, symbols, acronyms, equipment, standards, etc.
- Do not forget to identify your information/communication loops and **feedback** mechanisms
- Document source specifications, standard operating procedures, and/or references for your process


**Elements of a Well-Defined Process**

- SIPOC Diagram
- Process Flow Map (flowchart of your process)
- Gap Analysis
- RACI Chart – Documented roles and responsibilities relative to your process
- Service Level Agreement – between you and supplier, you and customer
- Other policy, guidance, reference documents
- Process performance measures/metrics

**What WORLD CLASS Looks Like**

1. End-to-end business process that is clearly defined and documented
2. Business process that is implemented as designed (plan your work, work your plan!)
3. Knowledgeable workforce – roles, tasks, process requirements (especially CTQs) and value-adding work
4. Process performance measures created, operationally defined, reviewed with performers and stakeholders
5. Process measured, monitored, continuously improved – STRETCH YOURSELF: How good COULD you be?
6. Meaningful recognition and celebration of successes, mistakes, lessons learned, and new opportunities

*The GOAL is Planned, Predictable Performance at a World Class Level!*