



## SIPOC+CM+CE Collection Form

John W. Moran<sup>1</sup>

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### Description:

The SIPOC+CM+CE Collection Form (SIPOC+CM+CE) is a variation of the SIPOC+CM Collection Form<sup>2</sup> or SIPOC+CM Diagram<sup>3</sup> a tool used to identify the major elements of the core processes of an organization. The name of the tool comes from the first letter of each word: **S**uppliers, **I**ntputs, **P**rocess, **O**utputs, **C**ustomers, **C**onstraints and **M**easures. In this variation, two additional core process description elements are added: **C**ompetitors and **E**xpectations. These elements add more depth to the analysis of a process. The analysis is expanded to identify not only the customers, but also to include customers' expectations for the process. In addition, identification of major competitors (who are supplying similar services) can be used as a benchmark to understand where competitors' processes may be better, similar, or worse.

### When to Use:

SIPOC+CM+CE can be used as an initial description of cross-functional activities, and can help identify performance measures related to the process under analysis. It creates a high-level map, which can be used to better understand the process, before a more detailed map is developed. SIPOC+CM+CE also captures barriers and issues surrounding cross-functional activities; these may be causing disruptions, and cause the process to perform below expectations. This tool can be useful to help an improvement team understand all variables impacting the process, and support their progress toward reaching consensus on the desired improvement.

### Construction Steps:

1. On a piece of flip chart paper, draw the SIPOC+CM+CE diagram, or use a sample template<sup>4</sup>. The diagram should include eleven blocks, one for each of the nine SIPOC+CM+CE components, and two blocks indicating the start and end points, as indicated in the example diagram below.
2. Clearly identify the process being analyzed and add it to the top left of the form (e.g., Title V Maternal Health, the box outlined in red in the example).

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<sup>1</sup> John W. Moran, PhD, is a Senior Quality Advisor to the Public Health Foundation and a Senior Fellow at the University of Minnesota, School of Public Health in the Division of Health Policy and Management. He is a previous member of PHAB's Evaluation and Quality Improvement Committee and Adjunct Professor at the Arizona State University College of Health Solutions' School for the Science of Health.

<sup>2</sup> *Public Health Quality Improvement Encyclopedia*, Public Health Foundation, ©2012, pp. 119-120

<sup>3</sup> Ron Bialek, Grace L. Duffy, and John W. Moran, *The Public Health Quality Improvement Handbook*, Quality Press, 2009, pp.183-185; see also the [American Society for Quality](http://www.asq.org) website.

<sup>4</sup> *SIPOC Diagram*, Kerri Simon, iSixSigma, © 2001, accessed October 27, 2016.

3. Identify the starting and ending points of the process (process boundaries). This will help the participants to understand the scope of the analysis. Add this information in the boxes marked “Begins with” and “Ends with” (indicated in green in the example).
4. On the SIPOC+CM+CE diagram, identify the data available for each of the following components. Each box should be labeled as seen in the example.
  - a. **Suppliers:** Internal or external providers of the raw materials, information, or technology to the process. *Purple in the example.*
  - b. **Inputs:** Material or information specifications needed by the process. *(Yellow in the example.)*
  - c. **Process:** Core, high-level activities (5-7) that comprise the process; a separate flowchart<sup>5</sup> can be created to provide additional detail. *(Blue in the example.)*
  - d. **Outputs:** Products, services or technology created by the process. *(Pink in the example.)*
  - e. **Customers:** Main users of the outputs from the process; the Kano Model<sup>6</sup> can help determine customer needs and wants. *(Purple in the example.)*
  - f. **Constraints:** Restraining forces facing the system or process; a Force Field Analysis<sup>7</sup> can be useful with identifying these forces. *(Yellow in the example.)*
  - g. **Measures:** Indicators used to manage the performance of the process. *(Pink in the example.)*
  - h. **Competitors:** Individuals or organizations who are offering similar products and services. *(Green in the example.)*
  - i. **Expectations:** Features or services that customers want, need, or desire. *Blue in the example.)*
5. If data are missing or incomplete for any of the nine major elements, assign members of the improvement team to gather these data.
6. The improvement team should use the completed SIPOC+CM+CE as a reference to guide the improvement process. As the team moves forward with improvements, this form should be regularly updated.

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<sup>5</sup> [Public Health Quality Improvement Encyclopedia](#), Public Health Foundation, ©2012, pp. 37-38.

<sup>6</sup> [Public Health Quality Improvement Encyclopedia](#), Public Health Foundation, ©2012, pp. 63-64.

<sup>7</sup> [Public Health Quality Improvement Encyclopedia](#), Public Health Foundation, ©2012, pp. 41-42.

## Example: Maternal Health SIPOC+CM+CE

This example shows a completed SIPOC+CM+CE. The example shows how SIPOC+CM+CE was used by the Iowa Maternal Health program, with the goal of improving childbirth outcomes.

