



Summary of Major Steps in the Lean Six Sigma DMAIC Process

Define Phase:

1. Identify the problems in the process.
2. Identify the process owner/sponsor.
3. Begin the project contract.
4. Assemble the project team.
5. Collect customer data and identify the customers (internal and external) who will be affected by the project.
6. Translate VOC into CTQs.
7. Develop the problem statement. Problem statements should typically answer the following questions:
 - a. What is the problem?
 - b. What is the current status or current situation of the process?
 - c. What needs to be done to change the process?
 - d. What target condition do we need to establish?
8. Establish the project metrics.
9. Identify necessary resources.
10. Create a project plan.
11. Create a communication plan.
12. Conduct a tollgate review.

Measure Phase:

1. Select product or process CTQ characteristics.
2. Define performance standards for Y's (outputs).
3. Identify the X's (inputs related to the 6M's).
4. Validate your measurement system for the Y's and X's.
5. Collect data.
6. Establish process capability (sigma level) for Y's.
7. Conduct a tollgate review.

Analyze Phase:

1. Localize the problem.
2. State the relationship you are trying to establish.
3. Establish the hypothesis or the questions describing the problem.
4. Decide on the appropriate techniques to prove your hypothesis.
5. Test the hypothesis using the data you collected in the Measure phase.
6. Analyze the results and reach conclusions.
7. Validate the hypothesis.
8. Conduct a tollgate review.

Improve Phase:

1. Determine the relationship between the X's and Y's.
2. Establish operating tolerances for X's.
3. Pilot your solutions to reduce variation and eliminate waste.
4. Confirm results.
5. Validate improvements.
6. Validate measurement system, if appropriate.
7. Conduct a tollgate review.

Control Phase:

1. Determine appropriate method to monitor process on-going.
2. Establish control plan.
3. Conduct capability analysis.
4. Validate control process and monitoring plan.
5. Obtain customer feedback (internal and external).
6. Establish training and communication plan.
7. Transfer ownership to project sponsor.
8. Determine lessons learned.
9. Conduct a tollgate review.