



Lean Six Sigma Black Belt Project Requirement

Quality Management

Black Belt Project Guidelines

Like all Black Belt certification programs, BLI requires successful completion of an improvement project to demonstrate effective application of the concepts covered in this course. Delivery of bottom-line results is a foundation of Six Sigma, so knowledge that is not put into practice does not advance the mission of performance improvement. The project must therefore yield improvement in a performance metric that is important to the organization's mission.

Process:

- 1) The student will select a process improvement project of sufficient scope and complexity to demonstrate all five phases of the Six Sigma improvement process: Define-Measure-Analyze-Improve-Control.
- 2) The project can be selected at any time. We recommend selecting the project during Course Sessions Two and Three on Prioritize and Define, and then working through your project as you progress through the course. Session exercises are designed to facilitate that process.
- 3) It is recommended, but not mandatory, that you submit your project charter to the instructor for evaluation prior to progressing with the project. The purpose of early submission is to establish that the project has the necessary scope to demonstrate learning, and to deliver significant bottom-line results.
- 4) We loosely define "significant" to be a 10% improvement in a key performance metric, but it is not possible to develop a hard and fast rule for all organizations and all situations. In some organizations, a 5% reduction in cost could be very significant (e.g., mature commodity-oriented business), in others, a 20% reduction could be insignificant if it affects only one small step in a larger process. Spell-out the improvement target up front in the charter and there will be no misunderstanding. Your submitted project **must be accompanied by a signed affidavit** from your organization's President, Chief Financial Officer, Division General Manager, or Local Controller stating that the project had a significant impact on business performance.
[Download Affidavit Form \(PDF - Adobe Reader Required\)](#)
- 5) If your organization has not implemented an overall Six Sigma program, ask your immediate supervisor to act as the Project Champion, and otherwise fill out the charter as if your organization was engaged in the Six Sigma process.
- 6) Submit the final project documentation for evaluation when the project is implemented.

A soft copy of the project should be submitted as MS Word, MS Excel, or Powerpoint file attachments to an email sent to:
BLIinstructor@bliqm.com.
Be sure to include your name, course username, email address, and phone number

The documents should demonstrate application of each phase of the D-M-A-I-C Six Sigma improvement process. **Note: Use a Thought Process Map to tie the various activities of your project together and explain the conclusions drawn from the application of each tool.** We are concerned with the **INTERPRETATION** of your



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actions, not just the creation of charts and graphs, so be sure to include enough commentary that we can understand your thought process. Your project will be evaluated within approximately two weeks, and you will be notified of your status at that time. If the project satisfies all requirements, you will be awarded a Black Belt certificate, which will be mailed to you. If there are shortcomings in your submission, you will receive an email with specific guidelines to revise your project submission. If you do not complete the project requirements in the second submission, an additional charge of \$200 may be assessed for each subsequent project submission.

Project Requirements:

Process Step	Requirement
Project Results	Summary statement of project results tying metric performance back to the Charter statement mission.
Prioritize and Define	<ul style="list-style-type: none"> Project Charter (Mandatory) Thought Process Map (Mandatory) S-I-P-O-C Process Flow Chart (Mandatory) Pareto Chart (Mandatory) Gantt Chart (Mandatory) CTQC Tree Diagram (Mandatory) CTQC's Identified with Operational Definition (Mandatory)
Measure	<ul style="list-style-type: none"> Measurement System Analysis (Mandatory) Trend Chart (Mandatory) Defect Opportunities Defined (Mandatory) DPMO Baseline and Sigma Level (Mandatory) Histogram (Mandatory) Statistical Process Control (Mandatory) Capability Analysis (Mandatory)
Analyze	Any FOUR of the following tools: <ul style="list-style-type: none"> Cause & Effect Diagram 5-Why, 1-How Analysis FMEA - Failure Mode and Effects Analysis Regression & Correlation Analysis One-Way Anova Hypothesis Testing (Mandatory) Design of Experiments (Mandatory): <ul style="list-style-type: none"> Full or Fractional Factorial Design
Improve	Any FOUR of the following tools: <ul style="list-style-type: none"> Brainstorming Error-Proofing System Dynamics Solution Selection Matrix Corrective Action Matrix Piloting Changes
Control	Control Plan (Mandatory) Control Chart(s) showing both BEFORE and AFTER data (Mandatory) Any THREE of the following tools: <ul style="list-style-type: none"> Revised Work Instructions (Standardized Work) 5-S Total Productive Maintenance Best Practices - Improvement Integration



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Final Project must be submitted within six months of course completion unless you obtain a written extension from the instructor.

If you have any questions regarding the Black Belt project, please direct them to:

BLInstructor@blign.com