



## Lean Six Sigma Project Selection Guidelines

- 1) **Existing Process** – The project should be *for a process that currently exists*, but is underperforming in some way. The process can be anything which converts inputs to outputs. If a process exists, but is inconsistent, then it is still a good candidate for a LSS project. But if no process exists then a better approach than LSS is Design for Lean Six Sigma.
- 2) **Number of Transactions** - A process with a *higher frequency of transactions* (e.g., 20 purchase orders per day, 100 parts per hour, 30 shipments per week) is preferable to one which operates with a lower frequency (e.g., annual reports, quarterly finance close). Lean Six Sigma is a data-based methodology, and if a process generates a limited amount of data this can make it difficult to apply some of the tools. NOTE: This does not mean that the DMAIC methodology cannot work in solving problems in processes with a lower frequency of transactions.
- 3) **Root Cause & Solution Unknown** – The project should be *one for which the root cause and solution are unknown*. If they are known, there is no need to use the DMAIC process. NOTE: This does not necessarily hold true for smaller-scoped projects which often require lean tools, in that often the solution is largely known (e.g., setup reduction, replenishment pull system, etc.). The recommended approach for such problems is kaizen, using the DMAIC structure.
- 4) **Timeframe** - The project should be *something that can be completed in 3 - 6 months*. One of the most common mistakes of new Black Belt / Green Belt students is to pick a project with a scope that is too big. NOTE: The timeframe of 3 – 6 months assumes that the BB / GB has an adequate amount of time to work on the project.
- 5) **Importance** - The project should be one that is of *strategic importance*. That is, the goal(s) of the project *should link directly to one or more of the annual company objectives*. If the project cannot be linked to one of the major objectives, then it is not a good candidate.
- 6) **Chance of Success** - The project should be something with a *high likelihood of success*. This includes *getting the right resources* (e.g., hours per week from team members) *and support from the Project Sponsor*. It is very important that the Sponsor understands their role in making a project successful. The Sponsor needs to (at a minimum):
  - a. Select the project and prepare a draft project charter
  - b. Provide resources for the project, including team members
  - c. Meet periodically with the BB / GB to provide input and direction
  - d. Help the BB / GB to overcome obstacles
  - e. Participate in Gate Reviews
- 7) **Scope** – Choosing an appropriate scope requires a balance between finding a project that is small enough to be *completed in 3 - 6 months*, but big enough to have significant impact. In some cases the goal of the project cannot be achieved in such a short timeframe. The recommended

approach for such a project is to break it into phases. Example: A BB used that approach to break a big project into three smaller ones with the following goals over a 14 month period:

- a. Phase I - Get Process into Statistical Control
- b. Phase II - Adjust Process to Meet Customer Requirements
- c. Phase III - Optimize Process to Maximize Consistency and Minimize Costs

- 8) **Impact** - The project *should have a significant financial impact*. A 'significant' financial impact is relative. The goal for GBs (25k-75k) is typically less than for BBs (75k-250k). Similarly, the goal set for a small firm tends to be lower than for a larger company. Some firms set an annual goal that may be a mix of larger and smaller projects, such as \$300+k total for a Black Belt. NOTE: A number of firms choose a lower goal for new BBs / GBs on their first project. This is done to allow the new BBs / GBs to focus on learning the DMAIC process.
- 9) **Measure of Success** – Projects should be chosen for which a specific measure of success has been clearly defined. Examples include reduction in scrap rate, increase in output level, reduction in error rate, etc. Also, it is recommended that there should always be an associated financial measure. Finally, it is recommended that projects be *avoided* where the primary measure is one that can be greatly affected by forces outside the control of the business. One example is customer satisfaction.
- 10) **Optional: Potential to Replicate** – It is preferred to choose a project that can be replicated elsewhere in the company. That is, the solution can be applied to other processes or operations that are similar in nature. A classic example would be developing a solution to a safety problem which can be replicated in many other processes with the same issue.