

Selecting Your Lean Six Sigma Improvement Project(s)

Your organization should assign a high-priority improvement project for you to work on during the training program. Selecting the right project can have a tremendous effect on your organization's business results. If project selection is done well, processes will function more efficiently in 3 to 6 months, employees will feel satisfied and appreciated for making business improvements and ultimately all stakeholders will see the benefit.

If project selection is done poorly, it may not have the support of senior management and roadblocks may not be removed due to other business priorities. Here are some guidelines to help you and your organization identify and prioritize potential improvement projects:

- Every business is different. You should make every effort to ensure your company's specific priorities are taken into account when evaluating potential improvement projects.
- Ask your business leader for the three greatest issues facing the business. Make sure the project is one of the issues or is directly related. This will ensure that your management team is giving the project the proper attention and support and is willing to quickly remove roadblocks.
- What are the greatest issues as seen from the eyes of your customers? Look through customer complaint logs, listen to call center telephone conversations and call customers that have stopped your company service. Create a Pareto Chart to prioritize issues. This will help with project prioritization and project selection.
- Is the project manageable? Can the project be completed within six months? If longer, you may lose members as they move to other jobs or the team may feel frustrated that they're not making a difference.
- Will the completed project have a measurable impact on the business processes or financial bottom line? Don't embark on a project without knowing what the benefits are to the business. This will keep your team motivated along the way.
- What is your process capability? If you haven't been measuring your process, how do you know it needs improvement? Make sure you know the amount of defects the process is currently producing and define your project desired outcome.

General Guidelines for Project Selection

- Any project should have identifiable process inputs and outputs.
- A good Lean Six Sigma project should never have a pre-determined solution.
- If you already know the answer, then just go fix it! (For example, Lean projects.)
- For projects that have operator or operator training as an input, focus on ways to reduce operator variation, making your process more robust to different or untrained operators.

- All projects need to be approached from the perspective of understanding the variation in process inputs, controlling them, and eliminating the defects.

Lean Six Sigma is project-intensive. Organizations such as General Electric complete as many as 7,000 Lean Six Sigma projects in a single year. Smaller companies can complete several hundred projects per year. Typically, Lean Six Sigma projects address three different areas of potential improvement: quality, cost and schedule. Critical-to-quality characteristics are designated CTQ; critical-to-cost, CTC; and critical-to-schedule, CTS. This classification can help focus Lean Six Sigma projects by defining project deliverables in terms of their impact on one or more characteristics.

Spreadsheets can provide an objective means of prioritizing potential improvement projects. First, your “Council of Champions” decides on a “Balanced Scorecard” of *project benefit metrics*, for example: Customer Satisfaction (Quality, Delivery, Service...), Sales, Profit, Cash Flow, New Business Generation, Safety, Employee Satisfaction, etc. Projects under consideration are rated with respect to each benefit metric, and then overall ratings are computed and used to rank the projects by overall benefit. A hypothetical example of this process is shown in **Figure 1**.

Potential projects should also be rated with respect to *project feasibility metrics* like Ease of Implementation, Likelihood of Success, Rapidity of ROI, Availability of Data, etc. The overall ratings are then computed and used to rank the projects by overall benefit. A hypothetical example of this process is shown in **Figure 2**.

Figure 1, Example of project benefits prioritization.

		Benefit metrics →										
		Customer satisfaction	Sales	Cost	Cash flow							
Relative weight →		2	1	1	1							
Projects	Reduce defects per unit for process A	3	3	9								18.0
	Improve call-center performance	9	3	1								22.0
	Reduce days in Accounts Receivable				9							9.0
	Reduce lead time for product family B	9	3									21.0
	Reduce WIP on production line C				9							9.0
	Find and qualify cheaper raw material			9								9.0
	Increase reliability of product D	9	3									21.0
												0.0
												0.0
												0.0
Total metric impact →		30	12	19	18	0	0	0	0	0	0	0.0
Rate each project for impact on each metric: 0 = none 1 = weak 3 = moderate 9 = strong												

Figure 2, Example of project feasibility prioritization.

Feasibility metrics →		Ease of implementation										Total project feasibility
		Likelihood of success										
Projects	Relative weight →	1	2									
	Reduce defects per unit for process A	9	3									15.0
	Improve call-center performance	1	3									7.0
	Reduce days in Accounts Receivable	3	9									21.0
	Reduce lead time for product family B	9	9									27.0
	Reduce WIP on production line C	9	9									27.0
	Find and qualify cheaper raw material	9	1									11.0
	Increase reliability of product D	9	3									15.0
												0.0
												0.0
												0.0
												0.0
												0.0

Rate each project with respect to each metric: 1 = low 3 = medium 9 = high

The final step in project selection should involve joint consideration of overall benefit and feasibility ratings. Projects ranking high for both benefit and feasibility are good candidates for immediate action. An example in Figures 1 and 2 is the project “Reduce lead time for product family B.”

Last but not least, considerable time during the first two-day session of the training program will be spent on the subject of project selection. If you have two or three potential improvement projects in mind before the first training session begins then information gained can be used to make a final decision regarding selection of the optimal improvement project. Your instructor will also be available to assist you in project selection if required. The project you select will form the basis for the application of the remainder of the training and will be the first outcome of your newly acquired knowledge and skills.