

Introduction

This white paper consists of two parts. Part 1 describes the 5 phases of execution of a DMAIC improvement project. During these phases we follow a total of 14 consecutive steps. In addition, we review 10 success factors gained from our own practical experience that can be applied to enhance the quality level of the improvement project. Part 2 describes an ideal situation that a Green or Black Belt trainee could create, so the revenue of the training will be maximized. The themes here are starting immediately, ask for advice and integrating the improvement project into your day to day work.

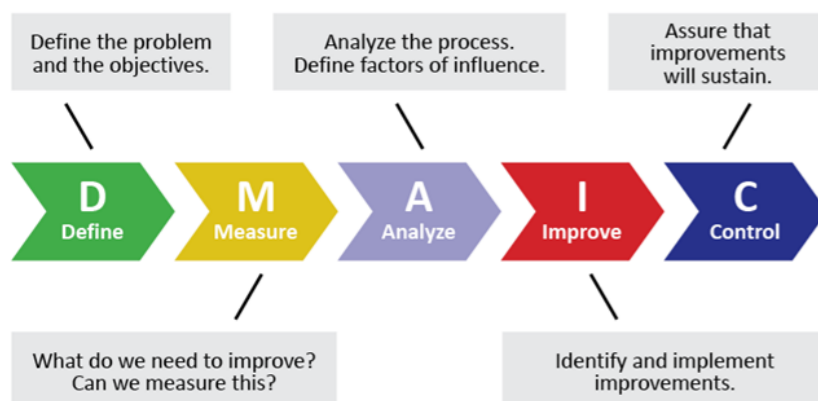
Part 1: Project management according to the DMAIC structure

An obvious motivation of people following a Lean Six Sigma Green or Black Belt training is to improve. This can be personal improvement, process improvement within an organization or a combination of both. The question is: how can you achieve that most efficiently (Lean)? Our experience: starting an improvement project immediately. This way, you can directly practice what you have learned in the training, get feedback from your trainer and ensure that you constantly look for opportunities to manage your improvement project even better.

Important key aspects of a project are:

- Limited
- Collaborative
- Aim (creation)
- Planning

Within the Lean Six Sigma Green and Black Belt training you will be educated to be an independent project leader for a Lean Six Sigma improvement project. The project management method is called: "DMAIC". Within this method, the aforementioned key words are discussed immediately in the beginning phase: the Definition phase.



In the **Definition phase**, the boundaries (Scope) are set, the result is defined, a team is formed, a plan is made and finally it is determined how the improvement project will be managed.

The **Measurement phase** informs us how well we perform at the start of the project. We will also determine whether the current measurement system is accurate enough or whether we need to improve it.

Based on the correct measurement data, in the **Analysis phase** we determine which factors will contribute to the actual improvement of our processes. If necessary, statistical techniques will be used to make fact-based decisions.

Now we know which factors are important, we can continue in the **Implementation phase** (Improve). Here it is determined how the new process should look like. Also bear in mind the need for training employees who need to do their work better (differently).

Finally, in the **Control phase** we ensure that the already improved process can be maintained or even be improved to a higher level. Controlling the process and standardized work are the key words here. And, of course, the success shall also be celebrated with the whole team at this stage!

| | | |
|---------|----|---------------------------------|
| Define | 1 | Define and Scope project |
| | 2 | Define defect and CTQs |
| | 3 | Plan and document project |
| Measure | 4 | Evaluate measurement system |
| | 5 | Establish baseline |
| | 6 | Set improvement goals |
| Analyze | 7 | Map process and identify inputs |
| | 8 | Isolate key inputs |
| | 9 | Develop $Y=f(X)$ function |
| Improve | 10 | Determine optimum settings |
| | 11 | Implement proposed improvement |
| | 12 | Validate proposed improvement |
| Control | 13 | Implement control strategy |
| | 14 | Close out project |

These 14 steps are generically applicable, both for typical Lean and typical Six Sigma improvement projects. The interpretation depends on the kind (nature) of the improvement project you have at hand. A Lean improvement project emphasizes more on tracking down and eliminating waste. Think of Value Stream Mapping and Analysis. Six Sigma improvement projects focus more on variation reduction, whereby more statistical techniques are used, such as probability calculation.

Experience from the field: success factors!

What is our experience in guiding people who are executing an improvement project? Great results are achieved and that is fun! The top 10 success factors listed below can be applied to achieve these results:

- Start as soon as possible
- Make sure to have a sparring partner
- Make sure to have a good Champion (sponsor)
- Define your project brief and clear
- Define your objective as a (partial) solution to your problem
- Define and monitor the scope of your project
- Choose collaborative and critical team members
- Treat your team members with respect. Unconditionally!
- Draw fact-based conclusions
- Never ever accept falling back to the old situation!

You may think this all looks so obvious. However in practice we see project leaders who struggle at the beginning and at the end of a project.

Problem definition and objectives are themes that are typically underestimated. Consultants can provide help to revitalize the project, simply by asking questions and providing structure according to DMAIC. Eventually the project is completed earlier and with better results.

In the final phase of a project, we see that improvements are being implemented but not sufficiently controlled. It is essential to ensure that the positive effects of your improvement project are retained by standardizing the new situation. Take your time to arrange this properly!

Part 2: Utopia or really possible?

Imagine this: you participate in a Lean Six Sigma training at Green or Black Belt level. By the end of the training you have already made quite much progress with your chosen improvement project, which will result in benefits for your organization. It turns out to be a fun-project, executed with a team of colleagues following a defined step-by-step plan.

Boost your training with a project!

The project execution is not always a bed of roses, but you can get advice from your coach. The first results emerge, now that you have a good problem definition, objective and process description. These themes are obvious but challenging to manage in practice. As Einstein once said: "If I had an hour to solve a problem, I'd spend 55 minutes thinking about the problem and 5 minutes thinking about the solution!"

The theoretical exam is around the corner, it therefore requires intensive learning. Checking notes, recalling the knowledge on things like waste and value and practicing the statistics! Fortunately, you have started on time. You will notice while working on your improvement project that the knowledge gained from the training is directly applicable. Finally, the big moment comes! You take your exam and as expected, you pass the exam with a nice score!

Now it is important to continue because your improvement project is not finished yet. The coaching that you received during your training is finished but it does not mean that the guidance from the coach suddenly ends. During the execution of your improvement project after your Belt training, we suggest you keep in touch with your trainer and coach and receive feedback. This motivates you to continue on the right track. Your supervisor sees that you are working well with the improvement project and he/she wants to give you an extra project assignment. You saw that coming and have already made your own proposal for the second improvement project, of course a project which will lead to improvements for your own process and the entire organization!

Now that the first improvement project has been completed successfully you are already at the end of the Definition phase of your second improvement project. You know that you can manage it well and you hardly need any guidance anymore. Colleagues will come to you for advice when carrying out their improvement projects!



Now imagine that this story is really about you (and your team)!

What is actually needed?

As a matter of fact, only a few good reasons why you allow yourself and your team not to be involved in the "usual" or "normal" work but in your improvement project.

Do you need some motivation? Ok, here is a list:

- We solve an important problem
- We add value to our organization
- We get the most out of the training
- We get appreciation from our client
- We get control over our process
- We get appreciation from other team members
- We work in a more structured way
- We get energy from the project execution

And :

It is much more fun to solve problems structurally than fire-fighting!

In short

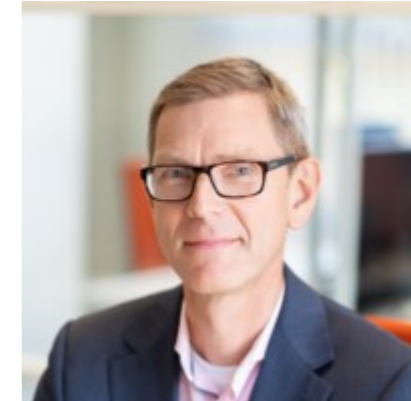
DMAIC is a method that helps you to implement improvement projects in a structured manner and to achieve successful results. You will have the biggest chance of being successful if you start an improvement project as soon as possible (already during your training).

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About the Author



As a general process improver and experienced project manager, I help organizations to translate complex challenges into practical solutions. The approach is aimed at getting people in their own organization moving. I do this by providing insight into the possibilities for improvement and learning to look and think differently about our own business processes. Training in Lean Six Sigma methodologies that can be applied directly in the situation are part of my approach. I also provide the Lean Six Sigma Green Belt and Black Belt training courses.

Theo de Goede
Master Black Belt

About LSSA B.V.

The Lean Six Sigma Academy is the scheme owner of Lean Six Sigma. We publish Lean Six Sigma training content including syllabi, readers, exercise books, presentation materials, templates and exams. The content is available in several languages. We support many training companies and educational institutions around the world. This way you can focus on your students and participants while we are focusing on the development of the content you need. Training companies and educational institutions may request the status of ATO ('Accredited Training Organization'), enabling them to subscribe participants for the official exams. These exams are offered on paper as well as through proctoring.