

Accelerating Six Sigma Projects

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This article is intended for Master Black Belts, Black Belts and Team Leaders, Process Improvement Managers

The Only Rule is about Maximum Time

When I was first introduced to business improvement with Six Sigma, I was told that projects typically take around 12 to 16 weeks to complete. Many of the people I worked with were told the same thing. How do you suppose a statement like this affects the way middle and senior managers think and feel about business improvement initiatives; particularly in the early stages of implementation? What thoughts might they have as they think about their role in providing staff for project work over that period of time?

My experience has been that most Managers say they are already working “flat out” and don’t have the people to spare. Committing resources to three or four months of project work is going to be a stretch. I’ve lost count of the number of times I’ve seen projects blow out and take six, eight, twelve months to complete as team members are continually withdrawn from project work. As they take longer and longer to complete, the credibility of the improvement initiative itself is eroded, and even the project team leaders themselves can start to lose their desire to do the project work.

How Long Should a Project Take to Complete?

Is this avoidable? Can something be done to at least minimize the chance of this occurring? I believe the answer is yes. This whole book has been about how to build *a system of improvement* and *a system that supports and drives improvement*. At the end of the day you can have a great improvement strategy, a fantastic operating system, and the best people as team leaders, but if you don’t do the work and get runs on the board, the initiative will certainly die.

Where did this thinking about how long a typical Six Sigma project should take come from? I now think that this belief about a typical time frame for a project has been developed through experience with more complex types of projects. As I’ve already stated, Six Sigma in its original form is a highly statistical methodology for identifying the key variables to work on for managing variation, and three to four months is probably quite reasonable for complex processes such as those found in pharmaceutical, aeronautical and many manufacturing processes.

But Six Sigma is not limited to such processes and has evolved so much that its application to process improvement is virtually universal. The reality is this – the minimum time for project completion depends entirely upon the type of project being undertaken. The only rule that I promote about project duration is this:

“A project should take no longer than 12 to 16 weeks to complete”.

There are two reasons why project completion in a reasonable time frame is necessary.

Firstly, business leaders want to see results. Without obvious results being realized it is highly unlikely that the initiative will get the focus from business leaders that it deserves and needs for success.

Secondly, momentum for continual improvement is more likely to be generated when projects are being completed in a reasonable time and success is frequently experienced. Momentum is very challenging to maintain for any project work when the duration of the projects seems to drag out endlessly, particularly those that require part time involvement by project team members.

So how quickly can Six Sigma projects be completed?

The Accelerated Project Approach

To answer that question, let me discuss an “accelerated” approach to process improvement project work. This method of improving process performance is gaining recognition as companies mature in their business improvement efforts using the Six Sigma framework.

The accelerated approach is based on these five principles:

1. The logic of DMAIC is still applied
2. The only steps completed and tools used are those necessary for getting **optimum solutions** and **buy-in from key stakeholders**
3. Analysis (of any kind) is only undertaken to **answer specific questions** and confirm or negate **cause and effect relationships**
4. The project is conducted as a **series of meetings** in a **short period of time** (i.e. 1 week), and
5. Team member **resources** are appropriately **allocated, scheduled and available** for the duration of project work. A team leader that plans the entire project before it starts will be able to inform relevant stakeholders of resource requirements in advance.

If you apply these principles, my experience has been that your Lean or Six Sigma project can take as little as three days to create a solution implementation plan. You may not be able to have solutions implemented in that time frame, but you can certainly walk away with a plan for making the change happen.

How do you suppose a manager might think about business improvement project work if in less than a week an implementation plan for improving a core business process is delivered? I think we all know the answer to that.

Conditions for Success

For the accelerated project to work, it helps to do the project under certain conditions.

- **Team Membership:** Stakeholders who have a critical role in ensuring long-term sustainability of changes are included as members of the project team.
- **Attendance:** Team members must be able to attend all meetings.
- **Meeting Chunks:** Project work can be chunked into 3 or 4 major meetings scheduled over a short or compressed period of time.
- **Data Collection:** Any data required for analysis can be collected and consolidated in a very short time frame. On occasion, it may prove necessary to undertake pre-measuring before starting the team based project work. Pre-measuring involves the planning of data collection with one or two people with relevant content knowledge, and the collection of sufficient data to be able to undertake relevant statistical analysis.
- **Time for Preparation:** The project team leader has the time to prepare effectively for each meeting.
- **Meeting location:** If meetings are to be conducted virtually, use tools that foster collaboration and information sharing.

Benefits of Accelerating Projects

The benefits of the accelerated approach include these.

- Rapid success promotes **positive associations** with the initiative at all levels within the company.
- **Perception** about how much work is required to make rapid change can be positively altered.
- **Momentum** for continual improvement is generated – a culture shift can be created quite rapidly.
- More project cycles promotes more **rapid learning** of the technical skills associated with process improvement.

Example of an Accelerated Project

Not so long ago I had the privilege of facilitating a project to reduce the cycle time for distributing and installing PCs in a medium sized company. The project involved four days of work including one day to set up the project and three successive days for project team meetings.

What was interesting for the many people who studied this project was the fact that the DMAIC sequence was followed, data was collected and analyzed in between meetings, and the association with the work was so positive that people had asked to come along and the team size had grown to about 12 people in the final meeting.

Let me give you an overview of how that project as conducted.

- The project charter was created in detail with the Group Manager up front.
 - Decision constraints and operating constraints were identified as well as the amount of money the team could spend on their solutions without escalation to the Manager for approval.
 - The entire project was planned as a series of meetings with the agenda for each one prepared in advance – in detail.
 - Each project meeting was 4 hours long and held in the afternoon.
 - The schedule of work was as follows.
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PREWORK

Morning

- Prepare the project charter in conjunction with the Group Manager
- Confirm the meeting schedule
- Identify key stakeholders and establish agreement about resource allocation

Afternoon

- Meet with key stakeholders, establish agreement about meeting attendance and associated administration details
- Confirm meeting venue and resources
- Prepare and circulate project plan / meeting agendas



DAY ONE

Morning

- Prepare meeting venue and relevant templates
- Rehearse the meeting

Afternoon – 1st Team Meeting

- Document the process
- Undertake high level process cycle time analysis
- Prepare a data collection plan
- Prepare data collection tools
- Develop and agree upon an action plan for collection of data.



DAY TWO

Morning

- All team members participate in the collection of data
- Prepare the venue and relevant templates
- Rehearse the meeting
- Data sent to and consolidated by team leader and analysed for cause and effect relationships

Afternoon – 2nd Team Meeting

- Review graphical analysis of the data and confirm findings
- Identify and validate lower level causes of variation
- Identify potential solutions and then select final solution for treating validated causes
- Consolidate and confirm relevant follow up actions.



DAY THREE

Morning

- Prepare venue and relevant templates
- Rehearse the meeting

Afternoon – 3rd Team Meeting

- Create new process flowcharts incorporating relevant solutions
- Conduct a process Failure Mode & Effect Analysis (FMEA)
- Develop a solution implementation plan including schedule and task allocation.

The final project report was handed to the Group Manager on the morning after the final project team meeting.

It is worth noting that both Six Sigma and Lean specific tools were used to measure and analyze the primary variable of concern – ***time***.

What was most interesting was that the size of the team grew over the course of three days. The positive talk about how much each meeting was actually achieving was sufficient to generate interest in other group employees. The end result of this project was a sustained reduction in cycle time of more than 50 percent within one month of the final meeting.

Key Points

Time Frame

In most cases, Six Sigma projects should take no longer than 12 to 16 weeks at the most to complete. If they are taking longer to do the project work, it may be for any number of reasons:

- The scope of the project may be too large
- There may be data quality or data access issues in which case the project should be parked until these are sorted out
- Management focus is elsewhere
- The project team leader is challenged in doing the work (not sure how to do it, not motivated to do it, not able to do it)

- It's not really a good fit Six Sigma project

Momentum

The more frequently achievements or success in the area of business improvement can be identified, the greater the level of momentum for improvement in the workplace. Accelerated projects contribute to that building of momentum.

Accelerated Projects

Projects can take as little as one week to complete if you take an accelerated approach. This requires good planning, participation by the key stakeholders, and a commitment to rapidly working through the DMAIC logic to make sustainable improvements to process performance

Improving the Performance of Meetings

As you can see, the focus of my accelerated Six Sigma example is the use of a small number of well planned and executed meetings. Yet the majority of meetings, despite best intentions, often produce low quality outcomes, due to a number of reasons, including:

- Meetings take too long or do not engage team members
- Too few decisions are made
- Few actions result from decisions
- Lack of team collaboration
- Poor facilitation skills

Meetings are simply processes and like many critical processes succeed or fail based on how efficiently and effectively people share and analyze information and make effective business decisions.

Meeting performance is critical because, "effective communication and collaboration strategies lower costs, reduce business (project) latency, and improve both user and process productivity." (Mike Gotta, Burton Group).

High performance meetings share certain characteristics. These include:

- Advance planning
- Discipline and focus on the problem
- Use of a structured methodology
- Active participation of all team members
- Use of critical thinking skills in brainstorming, analyzing, prioritizing and action planning
- Strong leadership and facilitation
- Ability to solve complex problems in real time during virtual team meetings

Like many solutions to today's business problems the right information technology can improve the performance of meetings particularly in the areas of coordination, information sharing, brainstorming, analysis and decision making, regardless of whether the team meets in the same room or virtually.

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