

# The Importance of Project Selection

Why Six Sigma Projects Falter,  
How to Assure Success and Sustainability

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A White Paper from Six Sigma Qualtec



*“A problem well stated is a problem half solved.”*

– Charles Kettering, U.S. engineer, inventor

In a recent survey of 43 companies that implemented Six Sigma in the past year, 63 percent of Black Belt projects had either stalled out or had not been completed “on time,” as defined by the businesses themselves. Yet every single one of those businesses claimed that it was “critical” to complete their projects on time.

Were the designated Champions asleep at the wheel? Was there a lack of support given to hand-picked Black Belts, leaving them stranded in the field? Did the business’ senior management not mean it when they said they were striving for breakthrough performance? What happened?

First of all, let’s be clear about one thing: **Six Sigma works**. But in order for Six Sigma to fulfill its promise to achieve near perfect performance, the process must be rigorously followed. Every step along the way must be placed clearly and firmly in the right place. Each movement must be based on previously valid work. The course must be charted point by point. Otherwise, you’ll wallow in the Six Sigma doldrums.

It’s not the fault of executive leadership. The Six Sigma Champion is not to blame. The Black Belt is, of course, doing everything he or she possibly can to achieve successful results. And it is ultimately not a failure of Six Sigma. The real story that lies behind these challenging statistics emphasizes the absolute importance of a core factor in the success of every Six Sigma initiative: **Project Selection**.

Upon closer analysis, 75 percent of the companies admitted they didn’t have a Project Selection methodology that assured on-time completion. Forty-eight percent of the projects were initially “poorly designed,” and 35 percent of the Black Belts surveyed said they started out their Six Sigma efforts by receiving project assignments that had “little chance” of success from the start.

A critical point for sustainability of Six Sigma efforts, Project Selection will determine from the outset the probability of success or failure in your deployment. Ultimately, if you don’t have a Project Selection process in place – one that is rigorously followed – you will falter.

## Key Elements of the Project Selection Process

- Commitment of senior management to the process
- Project selection based on realistic, available metrics
- Voice of the Customer/Voice of the Business/Voice of the Process
- Clear linkage to organizational goals
- Specific, detailed project plans
- Properly selected and prepared implementers, with key organizational support and alignment

While most businesses can say they are in pain, very few actually know where that pain is coming from. An organization has thousands of data points that are tracked scrupulously; however, most of those are financial or material output records that only provide a picture of what has already happened. The rear view mirror rarely provides an accurate report on the cost of poor quality.

Initially, any executive implementation team worth their salt can easily come up with 20 potential Six Sigma projects without even trying, the mythical “low hanging fruit.” The reason so many Black Belts fall significantly behind schedule – or even end up “re-starting” – is that the projects selected by executive leadership and forwarded by Champions frequently have a tenuous linkage to the organization’s goals. Further, once the projects are underway, Black Belts find they have little meaningful data to analyze, and few metrics that can be applied to the processes they believe they should be tracking. In practice, it is nearly impossible to find the root causes of the problems they’ve been told to fix.

## Examining Where (and Why) the Project Selection Process Breaks Down.

And let’s start at the top. It is presumed, when an organization commits to Six Sigma, that the business’ executive leadership understands the basic principles, the implications for commitment of high talent personnel, and the need for an infrastructure that supports the initiative.

But reality has a persistent way of nagging at the bottom line and the monthly reports out of Finance. “I agree with the concept of following all the processes,” say the leaders, “... but we are bleeding right now, and all of that takes too long. We need results now.”

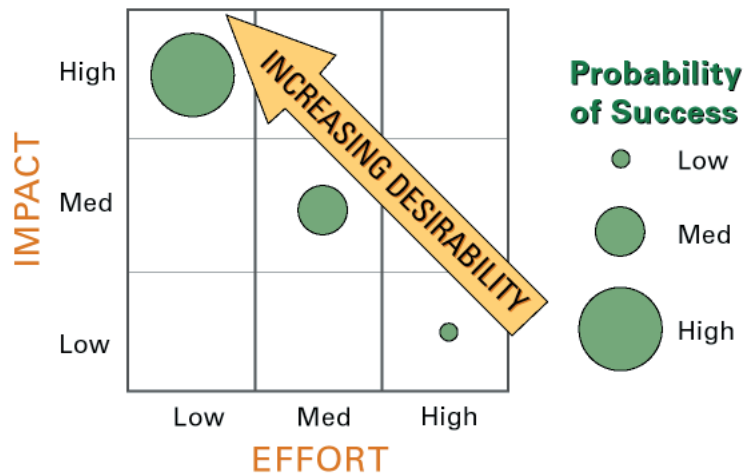
Thus, project selection begins its ill-fated journey. Too often, lead-off projects selected for Six Sigma deployment are those that, at a cursory level, are the “problem areas” that have long needed to be fixed. While they may, in fact, be problem areas, they are selected on the basis of perceived immediacy; seldom are they identified through the building of a strong business case that links the problem to the organization’s overall goals.

Once the high-level areas of pain have been “identified” by executive implementation teams, they are handed to the Champions, whose job it is to provide focus and direction to the organization’s Black Belts. Most often, the Champion simply passes project lists along, having completed a cursory attempt to organize them into functional areas. Here is the next misstep. Nothing will get a Six Sigma deployment in trouble more quickly than sending in the troops before there has been a real assessment of where they should be deployed, and why they should be directing their efforts in a particular area.

As the Black Belts receive their challenge, they are off and running. Mapping processes left and right. Amassing mounds of data for scrutiny. Implementing changes that turn the organization inside out. Exhausting themselves to create step improvements that save the company millions and millions of dollars in the first quarter of implementation.

Which brings us back to the survey results cited at the beginning of this article. Here is the lesson to be taken from a history of Six Sigma gone astray: Project Selection remains the single most important element of the process. Careful definition of the process, combined with relentless adherence, will assure your Six Sigma projects are completed on time and achieve the positive performance results to which you aspired. It isn't magic. It isn't destiny. It simply requires trusting the process to take you where you want to go.

**Figure 1**  
**Probability of Success**



The ideal process for Project Selection includes a commitment by executive leadership to clearly define the organization's priorities, as well as accept a realistic projection of the time required to let the effort play itself through. It includes making the organization's Champions accountable for creating the proper focus. And it means selecting – and then supporting – the most appropriate Black Belt candidates.

An organization truly committed to Six Sigma success will be listening to three important voices: the Voice of the Customer, the Voice of the Business and the Voice of the Process:

What is the source of your customers' satisfaction or dissatisfaction in their dealings with you? What makes them happy? What do you do that allows them to be successful in their own efforts? How do they want to do business with you? There are – or should be – fairly clear processes for seeking and digesting this information.

Looking internally, what does your business vision say is important? At the highest levels, what beliefs, attitudes and behaviors are rewarded? What areas are the most significant to the company's performance? If the areas targeted for improvement are not explicitly linked to the things that really matter to your executive leadership, why would there be a desire at any point along the way to extend the considerable effort needed to make a project work? Your employees won't care. The customer won't care.

What meaningful data is available? Where can you measure what needs to be measured now, without having to wade through mountains of raw information without unassociated with a specific process? In other words, pick a known environment, an established process. Focusing on a manageable target is crucial to a project's success.

It is the responsibility of executive leadership to create a pool of "bucket level" project ideas. The buckets should be big enough to allow for creative brainstorming that produces a more focused plan of attack, but specific enough to have strong links to stated business strategies. If you have a plan to grow your business in a particular area, for example, you'd better have the process for how to get there in place before you charge off in pursuit of vague objectives. The same applies for the direction of your Six Sigma deployment. When you spend time defining the big targets, it becomes much easier down the line to get a laser-sharp focus on the smaller, manageable pieces.

## Where Six Sigma Projects Reside

Six Sigma projects live in “the gaps” between what the Voice of the Customer and the Voice of the Business are saying should be performance goals. One way to assure that projects won’t get lost in the shuffle from the start is to build in an initial expectation and accountability. If your business goals for next year indicate a \$1 million increase in sales, for example, make the effort to fill that gap with specific numbers. Perhaps you will establish that 20 percent of that million-dollar gap will be closed by Six Sigma projects, another 30 percent by the opening of a new office in Europe, and the remaining 50 percent through new product development. Include those percentages as a part of the plan. Remember, that which gets measured, gets done.

This high level front-end work provides the Six Sigma Champion with plenty of material from which to identify those projects most likely to succeed. Using executive leadership’s broad guidance, the Champion must determine several factors that help bring actual projects into focus. Senior management has defined the general problem. It is now up to the Champion to assess the indicators and metrics that already exist within the organization that will make it possible to attack the problem properly.

Here is a classic case of choosing which battles to fight. It would be foolhardy to tackle every single process within your organization at once. For starters, your IS department couldn’t handle the strain of cranking out all the data required. And, as mentioned before, you want to assure that Six Sigma projects – particularly a first wave of projects – is successful. Follow your leading indicators of cost per unit, defect rates, cycle time, and you will quickly identify which area(s) can provide enough information that will actually be useful in future phases of your deployment. From your initial laundry list of 20 possible projects, you are suddenly down to five or six.

Consider that, realistically, the Champion will tend to focus on those projects in which he or she will have a stake in the outcome. After all, they are the ones dealing with “process pain” at the most direct and immediate level. And, obviously, a Champion will be most effective working in an area where they have direct influence. Ideally, a Champion should be forwarding projects that attach processes they either control or have a major influence over.

Now that you are clear that you’ll be measuring the correct processes, you’ll have a much better idea of how they need to be addressed. The Champion’s next step is to write a strong business case for each of the short-listed projects. It is supremely important at this point to establish a clear linkage between the project and the organization’s overall goals. Without this alignment, there will be little or no support of the Black Belt’s efforts down the line.

Typically, viable projects will be found three levels from the top. For example, if executive leadership has identified a weakness in a strategically significant business segment; the Champion has isolated Marketing and Sales as a probable suspect; the actual project will concentrate on a specific function. The cycle time for new product development is too long and does not respond to customers’ needs in a timely fashion. That’s your project. A specific function, linked to a strong business case, linked to a superordinate organizational goal.

Black Belts ready? Not so fast. After the project list has been defined and qualified, the implementation team must now set a list of action items tied to specific dates to create the final package that will be delivered to Black Belt candidates. The action item list is a step-by-step guide through the project, and the dates are real points in time. If a particular phase needs to be done by March 15, the stated deadline is March 15, not “end of first quarter, 2002.” If you want something done, measure it. If you want something done on time, state what “on time” means. Software tools can greatly aid in the building of this Project Plan.

## Ready for Deployment

You have now followed a project selection process that has created carefully defined, fully qualified projects ready for deployment. Let's take a moment to consider the wave of Black Belts that will be assigned to these projects. While Black Belt selection is a topic that deserves its own exploration, there is a clear relationship between the Project Selection process and Black Belt selection, and it is worth noting here

There is a lot of rhetoric in the Six Sigma environment that says Black Belts are "the best of the best" a company has to offer. Quite frankly, in practice this is rarely true. It goes against all senior management's instinct to take a proven top performer "off line" for two years to put them through specialized training and then on to special assignment. Even when this is the case, the individual more often than not is never really freed from their responsibility to their "real work." It just doesn't happen. Too much is at stake to deprive an already floundering department of the only person who is keeping it afloat, right?

Accepting this as a real world factor, perhaps there some wisdom in selecting Black Belt candidates based on your roster of "high talent/high potential" employees. Proper Black Belt selection is as much a succession planning activity as it is a Quality initiative. You want breakthrough performance? Try tying Six Sigma project success to an up-and-coming future business leader's reward and recognition package. And then get out of the way.

The project selection process discussed in this paper works ideally with first time ventures into Six Sigma territory and Black Belts involved in initial project design. What about those who are in the middle of stalled deployments? There is still an opportunity to use the project selection process to get things back on track

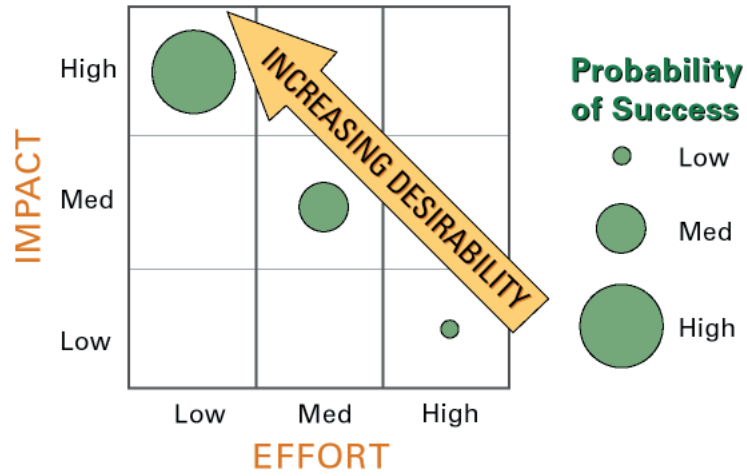
When it is clear that a project has run out of steam or has reached a stalemate, the Black Belt, Champion and implementation team need to put aside the past and sit down together to re-chart a course to success. Everyone sitting at the table has likely contributed to the mess; it is everyone's responsibility to contribute to the solution.

People can't perform to vague specifications. That's easy to fix. Take another run at building an action item list that includes specific deadlines and delivery dates. Does the business case for the project lack clarity? Take the time to spell it out again. Linkages, linkages, linkages. Has the organization as a whole thrown up its hands in despair and frustration? Assume the bully pulpit and provide a clear message that Six Sigma is the way you're now doing business, and sound like you mean it! Remember, discipline is a cultural change. Any lasting and meaningful change will take time. Accept it. Get on with it.

Finally, it is important to keep things in perspective. There is the old parable about how to eat an elephant: one bite at a time. You must remember that Six Sigma -results come one project at a time. The journey towards ultimate success consists of individual steps, taken one after another, after another. You will get there.

The desirability of a project increases as you move from the lower right to the upper left, and as the circle gets larger.

**Figure 1**  
***Desirability Increases***





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Six Sigma Qualtec  
821 Alexander Road  
Suite 130  
Princeton, NJ 08540 • USA

toll free (800) 247-9871  
phone (609) 925-9458  
fax (609) 419-9855  
email [info@ssqi.com](mailto:info@ssqi.com)  
website [www.ssqi.com](http://www.ssqi.com)

Six Sigma Qualtec  
1295 W. Washington Street  
Suite 208  
Tempe, AZ 85281 • USA

toll free (800) 247-9871  
phone (480) 586-2600  
fax (480) 586-2586  
email [info@ssqi.com](mailto:info@ssqi.com)  
website [www.ssqi.com](http://www.ssqi.com)

Six Sigma Qualtec  
P.O. Box 2959  
Kenilworth  
CV8 1XR  
United Kingdom

tel +44 (0) 1926 859555  
fax +44 (0) 8701 400023  
email [info@ssqi.co.uk](mailto:info@ssqi.co.uk)  
website [www.ssqi.co.uk](http://www.ssqi.co.uk)