6σ and IT

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Computer scientists today working in the Information Technology field face two challenges:
1. Come up with an optimal way to manage information that would provide the greatest benefit to the business.
2. Convince management that their organization is providing a benefit to the business.

The solution to both is Six Sigma.

Six Sigma was developed in the 1980’s by Motorola, Inc. This quality-control methodology was first intended for the manufacturing world. If applied correctly, this methodology leads to tremendous successes that are measured in number of defects per million opportunities. If a company manages to get up to the six-sigma level, that translates into 3.4 defects per million opportunities. Most successful organizations today are getting about 20,000 defects per million opportunities. This is why Six Sigma is turning out to be so revolutionary.

What is Six Sigma? Let’s look at an example: You have a manufacturing line that produces widgets. You notice that too many of your widgets do not meet specifications and you have to throw them away. This would be an ideal opportunity to use Six Sigma to fix the problem. To describe very briefly how this would happen, I can say that we would focus on measuring the number of defects and looking at the processes that led up to these defects. The main idea is that we would analyze the problem very thoroughly so in the end when we fix it, we know that it is fixed.

So far we know that Six Sigma is a successful methodology and we have a very general understanding of how it applies in a manufacturing environment. It is still not quite clear what this has to do with IT and more importantly, why it would be good for IT.

Six Sigma revolves around processes and metrics (number of defects) and that is pretty intuitive when it comes to manufacturing. The question is whether we can achieve the same success using the same methodology in services, IT in particular. Companies are gradually realizing that IT too can be looked at as a bunch of processes that sometimes produce defects. Once we are able to translate IT into these very exact quantifiable terms, we can go ahead and apply Six Sigma and reap the same benefits as does manufacturing. We would end up with an IT organization that produces quality results. Furthermore, IT would gain the impeccable ability to demonstrate its value by showing very measurable and precise metrics. The big problem is how to exactly transition from manufacturing to service-based IT.

In this talk, I will give a more detailed overview of the Six Sigma methodology and the steps that it entails. I will give a couple of illustrative examples focusing on services, and IT in particular. I will show the benefits to using this methodology. And finally, I will present some of the main challenges that IT organizations face today when trying to apply Six Sigma.