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### **Six Sigma for Quality Amelioration**

How can companies remain distinct in this era of intense competition? It certainly couldn't be mere dame luck at play? The unquenchable thirst for quality plays the lead role. Irrespective of whether a company is big or small, dedication, commitment and proper implementation of quality tools assures success.

Six Sigma is a highly disciplined method that guides a company to provide its customers 'near-perfect products. It employs both qualitative and quantitative techniques to ensure a defect rate as low as 3.4 defects per million opportunities. It is a measurement-based strategy, which explicitly quantifies how far one is from the ultimate goal, the reasons for disparity if any, and ways to overcome them.

#### **Methods of Six Sigma**

Six Sigma provides DMAIC (Define, Measure, Analyze, Improve and Control) and DMADV (Define, Measure, Analyze, Design and Verify), two methods that help improve the quality of both processes and products.

#### **DMAIC**

In the DMAIC process first the project goals are defined. Then the current performance is measured to identify the disparity between current and standard values. An analysis is then made to determine the root cause of the disparity. Then begins the process of improvement, which is in turn followed by the control of future processes.

So, It is assumed that a product already exists but is falling out of the limits if this method is to be applied (Step 2, i.e. measuring current performance, requires that the product exists.)

#### **DMADV**

Like DMAIC, DMADV also calls for a clear outlining of the project goals. Then customer expectations are measured and analyzed. Having established a feasible process, the actual design of the process and verification of its quality are undertaken. As is evident this process is used when a product doesn't exist but is due to be developed.

For the successful implementation of Six Sigma, a change in the organizational culture is necessary. Six Sigma is not a miracle that brings out a change independently. It demands the involvement and dedication of every person in the organization. From the viewpoint of Six Sigma, an organization can be divided into five levels each with a specific set of responsibilities towards implementation. They are:

- Senior Management
- Functional Managers (Champions)
- Quality Leaders (Master Black Belts)
- Project leaders (Black Belts)



## TenStep Supplemental Paper

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- Employees (Green Belts)

Customarily most companies engage external consultants to train black belts and then eventually bring it in house. For successful implementation, Six Sigma needs to be interwoven into the entire organization. In the process it ensures continuous learning and improvement.