

The fundamental objective of the Six Sigma methodology is the implementation of a measurement-based strategy that focuses on process improvement and variation reduction through the application of Six Sigma improvement projects. This is accomplished through the use of two Six Sigma sub-methodologies: DMAIC and DMADV. The Six Sigma DMAIC process (define, measure, analyze, improve, control) is an improvement system for existing processes falling below specification and looking for incremental improvement. The Six Sigma DMADV process (define, measure, analyze, design, verify) is an improvement system used to develop new processes or products at Six Sigma quality levels. It can also be employed if a current process requires more than just incremental improvement.

According to the Six Sigma Academy, companies save approximately \$230,000 per project and can complete four to 6 projects per year. General Electric, one of the most successful companies implementing Six Sigma, has estimated benefits on the order of \$10 billion during the first five years of implementation. GE first began Six Sigma in 1995 after Motorola and Allied Signal blazed the Six Sigma trail. Since then, thousands of companies around the world have discovered the far reaching benefits of Six Sigma.

Six Sigma and IT (in a nutshell)

Often considered an island unto itself, technology development and implementation does not really occur in a vacuum. However, the interrelated nature of managerial, quality and technological systems, and the inherent benefits of a truly integrated view are not necessarily evident to the Information Technology (IT) professional. Consequently, increasing implementation costs and an array of idiosyncratic IT methodologies plague many IT departments. Functional and procedural isolation have deprived technology companies of the quality and cost benefits enjoyed beyond the IT divide – or circuit curtain.

Six Sigma is used effectively in manufacturing, service, financial and educational settings to improve processes and achieve time and cost benefits by eliminating waste and inefficiencies. These same defects can be found in IT departments. It need not be that one side of the corporate corridor enjoys savings and cost avoidance while the other side is left floundering. Like other functional areas, IT departments are comprised of individuals working together utilizing common practices and procedures. So, ultimately, the same Six Sigma tenets employed in such traditional functions as product assembly/manufacturing/accounting and customer service can benefit IT organizations – with a little adaptation.

The system development life cycle (SDLC) is meant to bring order and procedural accountability to the creation and production of new technology offerings. It also can play a role as a unifying procedural basis for Six Sigma improvement activities in IT. A simplified deployment and implementation model is designed to align the SDLC with Six Sigma's DMAIC. A case study drawn from a Fortune 50 financial services firm shows how truly staggering the savings and achievements can be when these methodologies are combined.