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## Thinking About Six Sigma? It's Time to Act.

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Six Sigma, a quality methodology developed by Motorola in the late 1980s, has become a synonym with quality improvement. Six Sigma, as implemented by Motorola successfully from 1987-1992 and that resulted in cumulative savings of more than \$2 billion for the company, appears to be extinct today. Widely known as a breakthrough strategy, Six Sigma has evolved over time and has been well documented and implemented. Six Sigma requires a specific problem-solving project with significant potential return on investment--or a bottom line result. This approach has merit, and many consultants have converted their problem solving approach to Six Sigma methodology. However, Six Sigma requires serious senior management commitment to the methodology in dollars and time.

Many executives wonder whether their company should commit to Six Sigma's problem solving or not. Six Sigma is not a silver bullet, and it is not a cure-all for all companies. For management to evaluate Six Sigma for their company, they must consider the benefits and cost of implementing the methodology. To determine the potential benefits of Six Sigma, management must first understand the cost breakdown of their operations. The cost of providing service or producing product must be considered based on industry benchmarks. The cost of poor quality in terms of internal and external failures and the cost of inspection, test or verification must be reviewed. Unless the facts about company performance are known, all initiatives will appear unjustifiable.

For management to commit to launching a Six Sigma initiative, questions that must be answered include: What can Six Sigma do for my company in both the short and long term? How much will it cost? Table 1 analyzes the need for Six Sigma implementation for different-sized companies.

Number of employees	100	500	1000
Annual sales (millions)	10	50	100
Cost of implementing Six Sigma (millions)	0.5	1.5	3
Cost of poor quality at 20% (millions)	2	10	20
Cost of implementing Six Sigma as a % of cost of poor quality	25	15	15
Minimum number of projects to be identified for breakeven	3	10	20
Minimum number of projects to be identified for 100% return on investment.	6-8	15-25	35 - 50

**TABLE 1:** Six Sigma implementation need analysis table.



In this analysis I have made several assumptions about the average project size, sales, number of employees to be trained as Six Sigma Green Belt or Black Belt, and the cost of poor quality in a company. You could apply a similar analysis for your company.

Once the implementation of Six Sigma becomes an economically viable strategy, management must consider giving it the highest priority. Any competing initiative, conflicting priority or strategic initiative in progress must be clearly identified. Besides economic viability, other Six Sigma success factors must be addressed. Critical factors are:

- leader's commitment to Six Sigma
- common language to be used throughout the organization
- aggressive improvement goals that will force process re-engineering continually
- innovation as the key to achieving dramatic improvement
- process thinking for decision making based on facts, not emotions
- communication to maintain the continuity and interest in the Six Sigma initiative
- metrics for assessing the next steps to achieve dramatic results; correct measurements are a must to achieve measurable improvement
- improvement as a way of life; the company must plan to improve quality everyday
- employee engagement by making the Six Sigma initiative a rewarding experience.

The most critical success factor is personal involvement of an organization's chief executive, which may inspire employees to do their best as they feel they are working for the chief executive. Employees are uplifted when they feel that they are involved in achieving a higher cause instead of just daily duties.

Uncertainty about initiating Six Sigma comes from several unknowns about the amount of effort involved, level of financial commitment, potential for success and the fear of failure. One way to overcome the initial uncertainties is to establish specific, measurable, attainable, realistic and tangible goals. Thinking positively about how to achieve these specific goals and how to benefit from using Six Sigma in terms of awareness, cultural change, focus on quality, savings and profitability will expedite the decision making process. This decision making must be based on the company's needs to reduce waste, save money and improve profitability and on the cost in terms of time, resources and financial investment associated with implementing the Six Sigma initiative. Finally, the executives' edict, managers' motivation and employees' enthusiasm will ensure success of the Six Sigma initiative. Lacking the desire to succeed will make Six Sigma a shocking stigma, otherwise.