

Some Common Myths of Six Sigma Demystified

CQI, West of Scotland
4th March 2008

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- ❑ **Six Sigma is a well established strategy that seeks to identify and eliminate defects, mistakes or failures in business processes or systems by focusing on those performance characteristics that are of critical importance to customers (Snee, 2004)**
- ❑ **The presentation is based on our recent article which has been accepted for publication in the “International Journal of Quality and Reliability Management (August/September 2008)”**

❑ **Some Common Myths of Six Sigma....**

❑ **Six Sigma is another Management Fad**

- **A fad is defined as a new popular finding that bursts onto the scene and fades away after a short period of time (Hesseling1984)**
- **A fashion that is taken up with great enthusiasm for a brief period of time (American Heritage Dictionary)**
- **A fad can survive and become a “fit” only when the idea from the original fad becomes incorporated into the day-to-day fabric of the organisation and affects its overall management system and the work ethics of every employee (Marsh, 2000)**
- **Six Sigma has been around for over 20 years despite the fact that many reports have classified it as a management fad (Snee, 2004; Henderson and Evans, 2000)**

- **“There is more reality with Six Sigma than anything that has come down in a long time in business. The more you get involved with it, the more you are convinced” – Larry Bossidy, Past CEO of Honeywell (previously Allied Signal)**
- **For years, people have been calling Six Sigma a fad, said Michael Marx. “But that label doesn't seem to fit something that has a 20-year track record of impressive results and is still expanding” – iSixSigma Magazine, March 2007**

- **Is Six Sigma a management fad or fact? – Comments from leading practitioners and academics in the field**
 - **Six Sigma is not a fad in most of the organisations I am aware of; certainly it is not a fad in those organisations that do the deployment properly – Dr Ronald Snee, Tunnell Consulting, USA**
 - **Six Sigma is a management fact. Currently it is the most powerful and well known management strategy in Korea – Professor Sung Park, Korea**

- **If Six Sigma is appreciated as a rigorous approach to quality improvement with a clear and methodology-based roadmap, then it does have plenty of positive aspects that will stand the test of time – Professor T N Goh, National University of Singapore**
- **The suggestion that Six Sigma is a fad that has lasted for 2 decades seems to be an oxymoron – Dr Roger Hoerl, GE Global Research, USA**
- **Six Sigma is mostly fact with a little fad stirred in for good measure – Dr Lynne Hare, Kraft Foods Research, USA**

❑ Six Sigma is all about Statistics

- **Organisations require not just statistics to achieve Six Sigma quality level but more importantly requires change in organisational culture and visionary leadership permeating the entire organisation at all levels (Pande, 2000)**
- **Six Sigma is not just about statistics but rather based on the scientific method, utilizing statistical thinking (Hoerl and Snee, 2003)**

❑ **Six Sigma is only for manufacturing companies.....**

- **“Not improving non-manufacturing processes is one of the weakest areas in the quality management system of nearly every company” – George (1992)**

 **Higher Standards**

In its first year of implementing Six Sigma, Bank of America saved \$1.2 Billion in hard dollar cost savings

(Source: The Caler Group)



In 2003, our Six Sigma activities produced nearly \$200 million in financial benefits and delivered important quality enhancements (Source: Annual Report 2003)

- **Six Sigma as a quality and process improvement methodology has grown exponentially in the healthcare industry during the past 5 years in the USA and may be 2 to 3 years in Europe (Mast et al., 2006)**
- **The first healthcare organisation to implement Six Sigma into its culture was CHC in partnership with GE (Thomson, 2001)**
- **Today CHC has realised improvements in excess of \$20 million to the bottom-line (Lee, 2008)**

- **The Institute of Medicine (IOM) estimates that medical errors cost the nation approximately \$37 billion each year, with roughly \$18 billion of those costs associated with preventable errors (Kohn, Corrigan and Donaldson, 2001)**
- **An estimated £400 million is being paid in clinical negligence claims and adverse incidents resulted in approximately £2 billion per annum (Department of Health, 2001; Milligan and Robinson, 2003)**

- ❑ **Six Sigma works only in large organisations**
 - **“It does not matter what type or size of business Six Sigma methodology is applied to – no matter whether it is a 300 employee company or a 10 employee family business, Six Sigma will work as long as you follow the process effectively” – Brue, 2006**
 - **Mikel Harry developed a Six Sigma White Belt system for SMEs instead of heavily investing in Black Belt System - Harry and Crawford, 2005**

- **The greatest barrier to implementation of Six Sigma in SMEs to date has been the way the major Six Sigma training providers have structured their offerings - Snee and Hoerl, 2003**
- **Can Six Sigma be effectively applied to SMEs?– Comments from leading practitioners and academics in the field**
 - *“ All companies, large and small, share many common features and problems. Large companies, because of scale, may reap higher financial gains as a result of a given breakthrough, but this should not be taken to suggest that small companies would not benefit tremendously from its use” – Joseph De Feo, CEO of Juran Institute, USA*

- *“ Small and Medium Sized Enterprises invariably are offered the standard lengthy, expensive and overwhelming packages for Six Sigma training and implementation – Professor T N Goh, National University of Singapore*
- *“Six Sigma is very appropriate for smaller companies too. The Six Sigma strategy works well in billion dollar corporations as well as \$50 million privately held companies. In fact, it has been our experience that the results are usually quicker and more visible in smaller companies” – Dr Matthew Hu, Vice President of Technology and Innovation, ASI, USA*

❑ Six Sigma is same as TQM

- *“ the trouble with TQM, the failure of TQM, you can call it, is that there is no such thing. It is a buzzword. I have never used the term, as it carries no meaning” – Dr Deming, 1993*
- *“The most important addition of Six Sigma has been the introduction of a roadmap (DMAIC) that shows how to link and integrate the various tools and techniques into an overall approach to quality and process improvement” – Dr Snee, 2005*
- *“Six Sigma strives to address several of the short comings of TQM, such as lack of a bottom-line orientation, lack of dedicated resources, an informal and uncoordinated project selection process and use of “whoever is available” to conduct projects – Dr Hoerl, 2006*

- **“Unlike TQM, Six Sigma was not developed by techies who only dabbled in management and therefore produced only broad guidelines for management to follow. Six Sigma was created by some of America’s most gifted CEO’s” – Tom Pyzdek, 2005**
- **“TQM seemed to lack the overall process view embraced by Six Sigma and TQM failed to bring in the financial element to the extent necessary to capture the attention of top brass” – Dr Lynne Hare, 2005**
- **Six Sigma provides a very formal infrastructure – dedicated roles, budgets, project selection, tracking and review – Dr Hahn, 2005**

❑ **Six Sigma is not cost effective**

- **If Six Sigma is implemented wisely, organisations can obtain a very high rate of return on their investment within the first year - Breyfogg et al, 2001**
- **Six Sigma has saved Fortune 500 companies over \$400 billion since 1987. Of the top 500 public companies in the United States, 53 percent have deployed Six Sigma to some degree - iSixSigma Magazine, January 2008**
- **Eighty-two percent of the top 100 companies use the Six Sigma methodology, whereas only 27 percent of the bottom 100 companies use it - iSixSigma Magazine, January 2008**

❑ Six Sigma requires strong infrastructure and massive training

- **Six Sigma requires significant investment at the outset for training the most talented people in the organisation and converting them into the so called “change agents”. However research with leading Six Sigma companies showed that the financial gains outweigh the investment costs**
- **Alternative on-line training programs are available through various training providers for less than \$2000 US (BB) and less than \$750 US (GB). But be very careful with low cost training programs !!!**

❑ Is Six Sigma here to stay?

➤ **Dr Roger Hoerl, GE, USA**

➤ **The five emerging trends are:**

- **Continuing evolution of Six Sigma, both in terms of tools and also in terms of deployment strategies**
- **Standardisation of DFSS methodology**
- **Growth in the applications of Six Sigma in both healthcare and financial services sectors**
- **Integration of Six Sigma into quality management system**
- **Integration of Six Sigma with Lean Thinking**

- ❑ **Professor Douglas Montgomery, ASU, USA**
 - **The future of Six Sigma depends on keeping it relevant to today's business needs and to continue to enhance and expand the traditional Six Sigma toolkit**
 - **As the use of Six Sigma matures, more and more companies begin to use Six Sigma as a culture change vehicle and leadership development tool**
 - **“Six Sigma has perhaps been the most successful business improvement strategy of the last 50 years”**
 - **Professor Douglas Montgomery, QREI Editorial, 2005**

□ **Agenda for Future Research.....**

- **The applications of Six Sigma in Sales, Marketing, HR, Healthcare, Financial Services and IT will continue to grow in the next 5 to 10 years.**
- **The integration of Six Sigma tools with Lean tools will also be an interesting area for many leading academics and practitioners**
- **The application of Six Sigma in SMEs is in its infancy.**
- **The applications of DFSS in healthcare, financial services and software development processes will also continue to grow.**

□ **Agenda for Future Research.....**

- **Very few Universities in Europe are currently engaged in teaching and research on Six Sigma related topics.**
- **Globalisation of Six Sigma – the awareness of Six Sigma in countries such as India, China, Korea, Malaysia, Middle Eastern and East European will grow exponentially in the next 5 years or so.**
- **Standardisation of Six Sigma training program !!!!**

- **Summary**
- **Six Sigma may be viewed by some organisations as just a passing management fad – due to poor leadership and lack of commitment from senior management.**
- **Six Sigma will continue to evolve. However the key concepts and sound principles of Six Sigma will stay for many years, irrespective of whatever the “next big thing” will be.**
- **Six Sigma continues to build momentum, with no signs of letting up in Europe and Asia in the next 5 to 8 years from today.**

Final Message is.....

“You do not have to do this, survival is not compulsory”

Dr W E Deming

Thank You !
Any Questions?

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