



Six Sigma

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One of the recent ‘management revolutions’ being widely applied is ‘six sigma’. Although apparently a new concept this is, in fact, an approach built on well-founded total quality principles, applied within a disciplined company-wide framework. Pioneered by GE in the USA, six sigma takes its name from a statistical term that measures how far a given process deviates from perfection. The central idea behind Six Sigma is that if you can measure how many "defects" you have in a process, you can systematically figure out how to eliminate them and get as close to "zero defects" as possible. To achieve Six Sigma quality, a process must produce no more than 3.4 defects per million opportunities. An "opportunity" is defined as a chance for non-conformance, or not meeting the required specifications.

GE began moving towards a focus on quality in the late '80s. A major employee involvement programme called ‘Work-Out’ established an approach which ‘, opened our culture to ideas from everyone, everywhere, decimated the bureaucracy and made boundary less behaviour a reflexive, natural part of our culture, thereby creating the learning environment that led to Six Sigma. Now, Six Sigma, in turn, is embedding quality thinking — process thinking — across every level and in every operation of our Company around the globe’. (Source: GE website, <https://www.ge.com/>).

At its core, Six Sigma revolves around a few key concepts.

Critical to Quality:	Attributes most important to the customer
Defect:	Failing to deliver what the customer wants
Process Capability:	What your process can deliver
Variation:	What the customer sees and feels
Stable Operations:	Ensuring consistent, predictable processes to improve what the customer sees and feels
Design for Six Sigma:	Designing to meet customer needs and process capability

Source: GE website: <https://www.ge.com>

Perhaps one of the key contributions to its success has been the highly disciplined approach taken to implementation and ongoing measurement. Taking a framework from the martial arts, Six Sigma involves a rigorous training and development process in which capability is measured in terms of grades, from beginner through to black belt.

A number of discussion forums have been set up where detailed information on tools, techniques and case experiences can be found – see, for example, www.isixsigma.com or the American Society for Quality, www.sixsigmaforum.com/.