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Beyond Six Sigma

Mix Six Sigma with other methodologies to make your own recipe for success.

by Praveen Gupta



The price of Six Sigma consulting, training and certification has been coming down and, interestingly, so is the amount or the rate of improvement being reported. We no longer hear success stories like Motorola or GE in larger number commensurate with the growth of Six Sigma, as evidenced by the number of Six Sigma books at Amazon.com (from about 200 in 2002 to 400 in 2004). In the absence of any well-established causal relationship between resources and improvement, it can be said that the world of Six Sigma is inefficiently attaining maturity. In other words, the Six Sigma methodology is becoming more and more standardized and is in need of help.

Besides Six Sigma, the lean methodology is also being implemented—either alone or in combination with Six Sigma. In addition, there are other methods of interest such as ISO 9001 standard, innovation, complexity management and scorecards. It's crucial to see beyond Six Sigma and maximize benefits from the knowledge of various methods.

ISO 9001—PDCA to 4 P's

ISO 9001 has received a bad rap from the beginning, although its intent has always been excellent, its requirements reasonably adequate, and the potential for benefits as intended is always present. However, the standard's system of assessment and registration has emphasized compliance, not effectiveness. One of the basic premises of ISO 9001 has been process thinking. In the field of quality, that means P-D-C-A (plan, do, check and act). The first two versions of ISO 9001 were heavy on inspection (check). The 2000 version of the standard is heavy on all aspects of PDCA, but there's still no change in the "check" phase. While working with Six Sigma, it's easy to understand that by just pre-checking, checking and re-checking processes, it's impossible to make them sustainable at a Six Sigma level of performance. Furthermore, the concept of checking prevents it from getting to the root cause, as expectation is set at an "acceptable" level, not at an "excellence" level. Basically, PDCA lets you shoot first rather than checking before aiming.

Take a look at the 4P model in my "[From PDCA to PPPP](#)" article (*QualityDigest.com*, March 2005). Accordingly, the purpose of the process must be clear, the expected target must be known, the preparations to achieve the target performance must be made. The preparations must be according to Ishikawa's 4Ms, which are material or information, method or approach, machines or tools, and manpower (mind power) or skills. This is a preventive feed-forward approach to achieving excellence, instead of corrective feedback approach through root cause analysis to achieving acceptable results.

Debate of Six Sigma vs. lean has been going on for awhile. But it isn't a choice between lean and Six Sigma, it's a question of balance between both initiatives. The ideal lean performance (the pull system with a batch size of 1) is difficult to achieve as it requires the entire supply chain to be synchronized and optimized. The basic lean tools and lean thinking are helpful in streamlining the operations and reducing the nonvalue-added activities. While working on a project, such lean principles (visual tools, value-stream mapping and throughput leveling) can be a set of powerful tools to benefit and accelerate the performance improvement. In other words, it's possible to bring in efficiency when implementing Six Sigma through lean tools.

One of the missing pieces in achieving lean and Six Sigma is the establishment of right measurements. Process thinking tells us that the measurements must be at the point of activities for fast feedback, instead of measuring the financials or the end results. Monitoring the end results without monitoring processes, isn't considered process management, and is a sure way to eventual failure of any initiative, whether Six Sigma or lean. Therefore, a set of integrated minimal meaningful economic measurements or a scorecard must be established to measure process performance throughout operations. If one has to set a measurement, it must be the performance or quality, if there's a need to implement two measurements, it must be performance and responsiveness (cycle time). The tendency is to measure cost or productivity first, which isn't a process performance measurement. In fact, just having cost reduction or productivity improvement measurements may have adverse effects on the process performance.

In today's knowledge age, where information is being continually produced and performance

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enhancement is perpetually expected, innovation is the savior. In simple terms, this means "think and do it differently." Experiments have shown that thinking requires time. Getting employee ideas on a regular basis requires a process for idea management. Therefore, businesses must implement an [idea management process](#) and drive innovation for continually achieving dramatic improvement.

Six Sigma, lean, scorecards, innovation and ISO 9001 must not be seen as separate initiatives. An integrated approach to effectively utilize and implement these initiatives must be devised for each corporation. Lean affects efficiency, Six Sigma influences performance improvement, innovation is designed for new solutions, scorecards are used for driving an economic use of various resources including these methodologies, finally, ISO 9001 sustains the use of all these methodologies. Don't handle ISO 9001 as a futile exercise in documentation, use the standard as a powerful management system to cultivate process thinking and integrate a right proportion of Six Sigma, lean, innovation and scorecards. In other words, don't take an expert's word for your business, simply develop your own recipe of Six Sigma, lean, innovation and scorecards for your corporation's performance improvement initiative.

About the author

*Praveen Gupta, ASQ Fellow, is president of [Quality Technology Co.](#), which is engaged in providing corporate performance improvement training and consulting services. Gupta teaches a course in corporate performance improvement using Six Sigma, lean, innovation and scorecard at the Kellstadt School of Business of DePaul University. He has authored several books including [Six Sigma Business Scorecard](#) (McGraw-Hill Co., 2003) and [The Six Sigma Performance Handbook](#) (McGraw-Hill Co., 2004). Currently, he is working on his new book, *Science of Innovation*.*

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