

Six Sigma Expert And USC Form Alliance

Collaborative approach will benefit clients

During a January meeting of top USC executives in Tampa, Six Sigma expert Dr. Edward Popovich took time out for this interview with Metrics editors.

Metrics: *Would you briefly explain the concept of Six Sigma quality for those who may not be entirely familiar with it?*

Ed Popovich: Six Sigma quality means meeting, exceeding and anticipating all customer requirements and fulfilling them with absolutely no wasted effort. It's a relentless pursuit for perfection, for reducing variations in processes, and for getting rid of inconsistencies. All of that translates directly to lower operating costs, streamlined production or service delivery, and substantially increased profit margins.

All work is a series of interconnected events called a process. In statistics, the sigma symbol represents standard deviation, which is the measure of variation in any process. Six Sigma measures how much a business process deviates from its goal. Every process has variation, but when a company reaches Six Sigma, that

variation is contained at a maximum of 3.4 defects per one million opportunities in which defects can be created. For instance, if each unit of production is considered to have only one defect opportunity per unit then a company that makes TVs, for example, reaches

“The hallmark of Six Sigma is measuring absolutely everything and tying it directly to the bottom line.”

Six Sigma by having only only 3.4 defective products out of every million.

M: *Where did Six Sigma originate?*

EP: The evolution of the Six Sigma process, although it wasn't called that then, began at Motorola in the late 1970's. The

catalyst was a key executive standing up in an officers' meeting and pronouncing, “The problem with Motorola is that our quality stinks.” Their Japanese competitors were outdistancing them at every turn. This led the company to take a fresh look at their operations to see what was causing the quality problems.

They ultimately looked at virtually every process in their business – turnover, procurement, supply chain management – and in 1981 established a goal: By 1986 their processes would be improved ten-fold. They reached that goal, but the Japanese were still taking them to task in the marketplace. They decided that they were on the right track, but needed to change the timetable.

The new goal of reaching Six Sigma by 1992 was established in 1987, but the real focus was to improve ten-fold every two years and simultaneously reduce cycle times and lead times by 50 percent. They were always focused on doing everything perfectly and faster. That makes sense, because that's how you make money.

Motorola really wrote the book on Six Sigma and now companies who really want

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to compete at a world class level – GE, Texas Instruments, Dell Computer – are all using it.

M: *What are the principal elements of Six Sigma?*

EP: The hallmark of Six Sigma is measuring everything. If you measure and track every process in your company, you're going to change the way you do business for the better. You need those diagnostics that tracking provides to determine what you've got, whether you need to innovate or improve it, or whether what you've got is so broken that you need to re-engineer it. You'll uncover some things that you don't need to be doing and get rid of them, which will save both time and money. And you'll make your company a lot simpler, because you're focusing on the most important things.

M: *Why is attaining Six Sigma worth the effort and the expense?*

EP: Just look at Motorola, GE and Dell Computer. They've improved their bottom lines enormously since implementing Six Sigma. It's about making money by meeting and exceeding your customers' requirements. It's about streamlining your processes, which means limiting your headaches. As far as I'm concerned, there's no downside.

M: *Why is it that only Six Sigma trained and certified personnel can implement what seems to be a fairly common sense program?*

EP: One of Dr. Deming's (the father of Total Quality Management) favorite lines was, "There's nothing common about common sense." Training your up and coming people to be black belts, or project leaders, is the first step

toward energizing a company's entire staff. Once other employees see the black belts' successes, they'll want to jump on the bandwagon. Everyone wants to be successful. Another important aspect to the training is that it be conducted in conjunction with an actual project. This is hands-on, real life experience that will benefit the company immediately. This has proven far more effective than using manufactured case studies.

Where a lot of companies go wrong is that they decide to train employees before they determine where their process

"You can jump start your Six Sigma efforts by hiring a firm like USC, which can help you choose the right projects, charter them, make the business case and put the right tracking systems in place."

deficiencies are. Training should be the third step in the Six Sigma approach, not the first. The first two steps should focus on identifying gaps in strategic performance through data collection and analysis, which leads to better project identification.

M: *How can a company determine if Six Sigma is right for them?*

EP: This reminds me of a meeting I had with SONY CFOs about three years ago. SONY's strategy was to bring in their top financial people from around the

world for training in Six Sigma, thinking that, if they bought into it, it would certainly work. The CFOs loved it. Six Sigma was the right thing to do for them because it had bottom line impact and they could see it immediately.

If your company is willing to dedicate the people and the time to do things the Six Sigma way – like focus on the customer, pick the right projects and strategically put effort into it and dedicate top people to it – then you're ready to be a world class operation.

You can jump-start your efforts with a consulting firm like USC, that can help with the up-front work required for Six Sigma. USC can add some power to the effort by helping you choose the right projects, charter them, make the business case and put the right tracking systems in place. They can help seed the ground for future Six Sigma efforts. A lot of companies want only to work internally and avoid outside consultants, but if they haven't done the advance work properly, only 25 percent of their projects will be successful. If USC is involved, the success rate on projects will be much higher and the company will benefit from their on-site training.

M: *Is it possible to acquire the tools and techniques of Six Sigma to support an internal implementation?*

EP: If I was a master carpenter, I could pass along my tools and techniques to someone else. But would he be able to build a beautiful cabinet? Maybe, maybe not. Tools and techniques are important, but you've got to be able to put it all together in an infrastructure that works. This is why training is so important and why training in conjunction with



Six Sigma continued

actually working through a project is even more valuable.

M: *What impact will Six Sigma have on a company's legacy systems and processes?*

EP: Your legacy systems and processes will have to become even more user friendly so that the data you need for successful tracking systems can be easily obtained. The focus has to be on real time tracking and performance and close attention must be paid to Six Sigma type metrics, like defects – which are simply defined as those products or services that don't hit your target.

M: *What kind of investment should a company be prepared to make to achieve Six Sigma level quality?*

EP: Be prepared to commit your top people to your Six Sigma effort. That means letting them dedicate 100 percent of their time to a project. They'll be trained as black belts and will be project leaders. And then be prepared to give them support by training green belts who can dedicate 30 percent of their time to the effort. Depending on the scope of a project, you can expect completion in four or five months.

Again, companies not willing or able to make that kind of commitment have options through consulting firms like USC.

The good thing about Six Sigma is that you'll see the net value of any investment right away. You'll be able to identify the costs and stack them up against your gains in a very short period of time.

The Road To Six Sigma

1. **DEFINE** projects and processes
2. **MEASURE** the process to establish baseline data, including both key process indicators and customer focused output metrics
3. **ANALYZE** the process to determine the few vital components that drive it
4. **IMPROVE** and innovate the process based on the analysis
5. **CONTROL** the process by maintaining the new level of efficiency and determining future steps

Edward A. Popovich, Ph. D.



Dr. Popovich is a Six Sigma Master Black Belt who provides consulting and training services focusing on:

- organizational effectiveness,
- quality systems,
- customer support,
- service leadership,
- business improvement and reengineering,
- total quality and organizational change, and
- statistical and technical analysis.

His clients have included such successful organizations as 3M, GE Capital, Johnson and Johnson, Hanley Hazeldon Center at St. Mary's Hospital, Lockheed Martin, J P Morgan, Motorola, NCR, Polaroid, Singapore Air Force, SONY and United Technologies Pratt & Whitney.

Dr. Popovich worked in several key capacities at Motorola before becoming a consultant, among them: manager of operational effectiveness with Motorola Paging Group and business operations manager of EMBARC Communication Services, a wholly owned subsidiary of Motorola.

In addition, he was a keynote speaker promoting Six Sigma on behalf of Motorola to such companies as IBM, Hewlett Packard and Ciba Geigy.

In 1984 Dr. Popovich joined Harris Corporation, a diversified, Fortune 500 electronics company. In 1987 he moved to Process Management International, a consulting firm specializing in quality principles. While there, he worked with Dr. W. Edwards Deming, the father of Total Quality Management (TQM). He is currently president of his own consulting firm, Sterling Enterprises International, Inc.

He holds a Ph. D. and Masters degree in statistics from the University of Florida, where he also earned a Bachelor of Science degree in mathematics.



USC Prescribes New Treatment For Financially Ailing Hospitals

DeltaScanSM analysis system puts hospitals on the road to recovery

USC Consulting Group has introduced a new service designed to help hospitals make ends meet.

“With revenues capped and belt tightening measures failing to keep pace with escalating costs, many hospitals are experiencing severely eroding margins. Some are even facing real financial crises,” says Terry Maher, vice president/senior operations manager and head of USC’s healthcare practice.

“Our new DeltaScan analytical tool offers them a way to work themselves out of difficult financial situations so that they can continue to provide excellent patient care while operating within their means.”

DeltaScan focuses in stages on the organization, the delivery of care, and managing the delivery of care. The analysis identifies key issues and opportunities for improvement that enable senior administrators to quickly target and set strategic priorities. It also benchmarks an institution against key financial measures, optimal process standards, and “best in class” competition for a much better understanding of its starting point on the road to recovery.

“The reason so many institutions fail to achieve their financial or operational goals is that they’re starting a lot further away from them than they think,” says USC Senior Vice President for Business Development, George W. Coffey.

“If they had a more objective appraisal of their current situation, they’d either

set different goals or pursue the same ones differently. DeltaScan will not only tell them what’s feasible, but it will quantify the economic benefits of making recommended changes to make sure that doing so is worthwhile.”

“Operational excellence is real and tangible to patients, physicians, caregivers and support people,” continued Maher.

“Key components of operational excellence for hospitals and medical centers include:

- Significant reductions in registration errors to reduce accounts receivable and ‘late pays/no pays’;
- Increased equipment availability via the near elimination of repair backlogs on key equipment;
- Easy, accurate and timely film retrieval for radiologists and attending physicians;
- Comprehensive and effective financial pre-admission process reduces bad debts and patient complaints;

- Improved emergency department case durations via streamlined protocols and support area coordination;
- Greatly reduced medical record processing times achieved by using cellular flow methodologies;
- Increased on-time completion of diagnostic and other outpatient procedures through effective scheduling and resource planning techniques;
- Nurses spend more time at the bedside delivering TLC than chasing meds, equipment and information;
- Concrete, tangible changes in the day-to-day coordination and delivery of care to boost staff morale.

USC Consulting Group has been instrumental in helping a number of hospitals achieve dramatic improvements in operating effectiveness. To find out more about DeltaScan, call Terry Maher at 800-621-6943 or e-mail him at tmaher@usccg.com.

Economic Environment Healthcare Vital Statistics

- There are 5,500 to 6,000 hospitals in the U.S.
- 15% of these are for-profit institutions.
- 35 to 50% of net revenue goes to salaries, wages and benefits vs. 10 to 20% in manufacturing.
- Hospitals/medical centers have higher wages per FTE, usually around \$35K.
- Nursing is typically 60 to 70 % of the total labor cost in a hospital.



Tampa Sales Meeting Sets Stage For Another Successful Year

USC aims for revenue growth in excess of 50 percent for second consecutive year

USC's senior operations and business development executives from around the nation converged on the home of Super Bowl XXXV in early January to kick off the 2001 selling season. They were introduced to a product and marketing display unlike anything they'd seen before and coached by a panel of experts.

Dr. Edward Popovich, who holds the title "master black belt" in the fast growing field of Six Sigma consulting, was a key presenter at the two-day event. Well known for his work with such world class companies as Motorola and

GE, and a former disciple of quality guru Dr. W. Edwards Deming, Popovich has entered into a professional affiliation with USC (see page 1 article) that will be of tremendous benefit to the firm's clients.

On the healthcare front, Terence L. Maher, senior operations manager and head of USC's healthcare practice, briefed the team on an important new product, DeltaScan. This product enables senior healthcare administrators to quickly identify, quantify and prioritize multiple strategic and tactical operating improvements for their institutions.

Western Regional Manager David Riggs briefed the group on USC's supply chain management successes. EVP/Senior Operations Manager, David Gustovich, assisted by Operations Manager Ken Staresinic, highlighted USC's recent work in the food industry generally and on behalf of ConAgra specifically. Then each regional manager presented a plan for achieving record growth in 2001.

Finally, new sales and marketing materials were introduced in support of each region's planned prospecting activities.

Progress Report

Six promoted at December meeting



David Gustovich, Senior Operations Manager since 1993, was promoted to executive partner in recognition of his success in the food and other

industries. He has been with the company for nearly 17 years.



Manager of Analysis, Richard "Rick" Gross, was also promoted to executive partner to acknowledge his contributions to the growth of the business. Rick has

been in his current post for 6 years and with the company for 20 years.

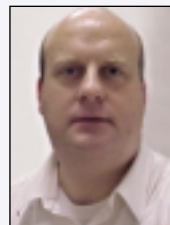


Richard "Dick" Teutsch, senior business development executive, was made a USC partner in recognition of his outstanding sales record.

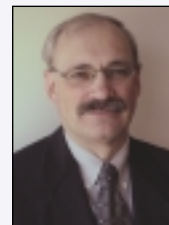
He joined the company in 1994 after a successful sales career at IBM.



Eric Clerk, who joined the company in 1986, was promoted to senior regional manager from regional manager.



Charlie Payne was promoted to operations manager from senior project manager a post he has held since joining USC in 1990.



J. Michael Spratt, senior operations manager since 1995, was also named a partner in the firm for his outstanding work for TYCO International, among other accomplishments.

He has been with USC since 1983.





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