MOVING THE NEEDLE

HOW TO HARNESS THE POWER OF SIX SIGMA

As global competition intensifies, the momentum to achieve transformational results has never been stronger. Competitive tensions are driving extreme cost-cutting. Stricter regulatory requirements demand certifiably accurate data. Measuring performance has become an imperative. World-leading corporate real estate departments are addressing all of these business realities using process improvement, and the method of choice is Six Sigma[1].

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1. Six Sigma is a registered trademark and service mark of Motorola, Inc.

Six Sigma was invented at Motorola, Inc., as a quality measure. It has evolved into a business improvement system that has taken hold at many high-performing organizations. A methodology that emerged from mechanized manufacturing might seem ill-adaptive to CRE and similar service cultures. Yet with guided implementation and disciplined use, Six Sigma yields equivalent and even greater results in service environments. But before a conventional, functional CRE department can correctly envision and actualize results, it must first engage in unconventional thinking about process, quality and improvement.

In this paper we will explore the compelling rationale for using Six Sigma in CRE as well as the ideological resistance that undermines its success. Finally, we offer a practical guide for where to apply Six Sigma in your organization.

A Benchmark Opportunity

As attuned as the business world is to predicting and achieving measurable results, it is remarkable how many organizations rely on spontaneous assumptions and indiscriminate guesswork to guide strategy. This is particularly true of service businesses such as real estate, which are perceived as subjective "people businesses" without perfectible processes. Six Sigma proves otherwise. By precisely defining and consistently measuring performance, it supports fact-based decision making and disciplined fulfillment of customer needs. It is a methodology that uncovers routine processes and elevates them into world-class processes, or best practices.

Across industries, companies that have identified and implemented best practices have a considerable cost advantage over their competitors. At an elemental level, any improvement methodology can increase efficiency. Examining a work process for the first time, for example, typically wrings out 30 percent inefficiency through the illuminating power of mere attention. Six Sigma goes farther. The application of Six Sigma often extracts at least 20 percent more than other methods on first pass and then further perfects initial outcomes through a continuous process of improving improvement. Understandably, those firms that hew their competitive edge through best practices – continually setting and exceeding industry benchmarks – express deep allegiance to the Six Sigma method.

Next-generation CRE global benchmarks will be created and owned by organizations that use Six Sigma to redefine what is required to be the best.

Redefining Best

Best practices are an integral component of a high-performance operating model for CRE. (Fig. 1) Continuously refined processes drive innovation, enable superior execution, propel breakthrough results and deliver strategic wins. But what does it mean to be the "best"?

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Mr. McCarty leads Six Sigma deployment strategies for the firm's clients, helping them to reduce costs by improving business processes. He also applies Six Sigma methodologies to dramatically improve customer satisfaction with delivery of real estate services.

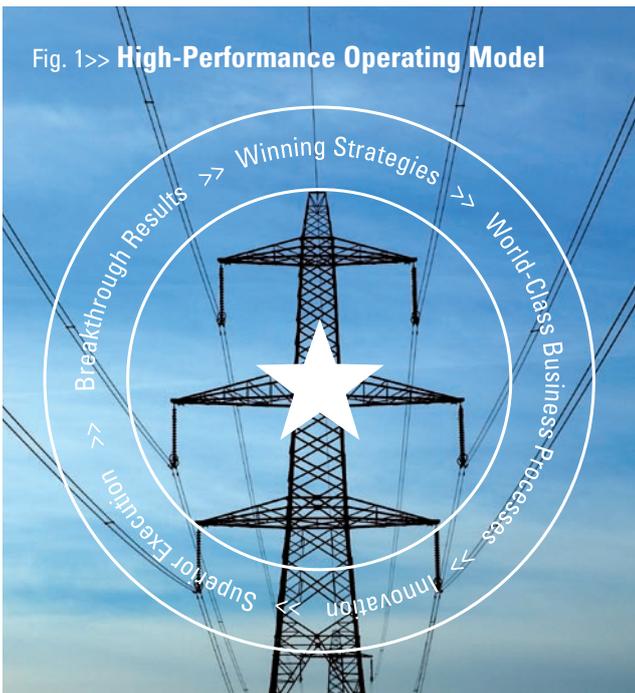As an experienced Six Sigma practitioner and deployment leader, Mr. McCarty has worked with more than 50 leadership teams at various companies and government organizations. He helped these teams develop strategies, create balanced scorecards and implement Six Sigma business improvement campaigns. The clients he has served span a broad range of industries and include Agilent, American Electric Power, Microsoft, Motorola and the United States Department of Defense.

Prior to joining Jones Lang LaSalle, Mr. McCarty was with Motorola for 28 years, most recently as Director of Six Sigma for Customers and Suppliers. He is a frequent featured speaker and has written many articles on Six Sigma. He also is lead author of The Six Sigma Black Belt Handbook and co-author of *The New Six Sigma… A Leader's Guide to Business Improvement and Sustainable Results.*

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Fig. 1>> **High-Performance Operating Model**

Winning Strategies >> World-Class Business Processes >> Innovation >> Superior Execution >> Breakthrough Results >>

"Best practice" is a ubiquitous term in business today, yet it remains widely misunderstood as an end rather than a means. Best practices will not remain best if they are merely overlaid on an average organization; they can only be sustained with a fact-based continuous improvement process to develop skills and build capability. Much as an athlete cannot consistently improve performance without an accurate timepiece, training log and schedule, business processes will likewise erode without measurements, interval monitoring and the discipline to respond to what those monitors indicate.

The rewards for diligently bettering one's best are particularly rich in service lines such as real estate, which are often flush with wasted effort and untapped productivity. Whereas manufacturing processes have undergone many cycles of improvement, as-is service processes are rarely more than 70 percent effective. The fact that such a rich field of operating profit lies afoot is not lost on pacesetting companies and their leaders. At least a quarter of Fortune 100 companies have publicly adopted Six Sigma for thoroughgoing transformation of their processes and performance. Countless other ambitious and farsighted firms of every size and stripe have followed this vanguard. CRE executives either have or will soon confront this momentum from inside their own firms, from outside relationships and competitors, or from both.

Marshalling Momentum

Jones Lang LaSalle's recent survey of 60 top CRE teams found that nearly two-thirds of their companies had adopted Six Sigma to some degree. (Fig. 2) One-quarter of those defined the level of adoption as company-wide. Another 30 percent reported that CRE was as-yet excluded from Six Sigma programming.

This gap—distancing CRE from a customer organization that is practicing Six Sigma—presents a pressing call to action for real estate executives. When an organization adopts process orientation, it hastens the displacement of those internal and external suppliers who do not. Standards and expectations of predictable performance rise. Those without the means and will to meet the test are excised.
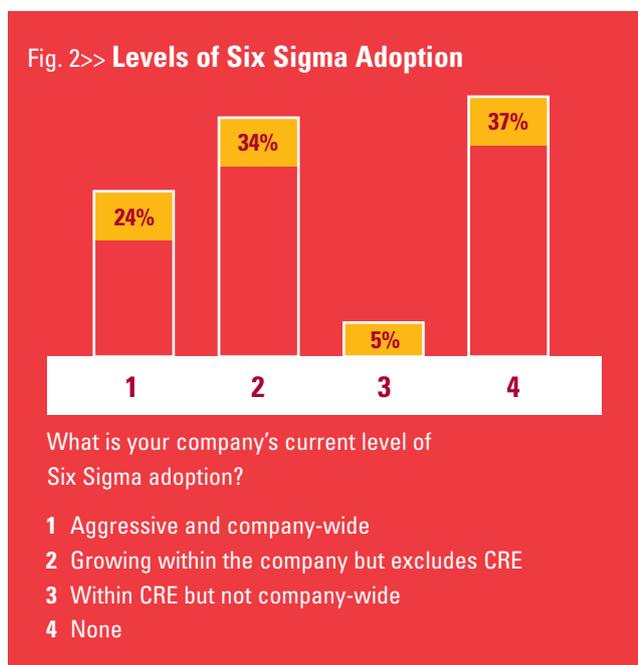
Six Sigma is not easy work. It requires sustained and invigorating leadership for an organization to stay the course. For that reason, it is important for senior CRE leaders to be clear-eyed to the need and committed to its promise. The first step in adopting Six Sigma is to forthrightly face the resistance that may linger in your own personal biases and organizational attitudes.

Dismantling Resistance

No one is against quality. No one opposes improvement. Business leaders uniformly attest to "embracing improvement," an unassailable outlook yet one whose meaning, methodology and results are impossible to pinpoint.

Resistance to Six Sigma is less likely to materialize in overt opposition and more likely to rest in covert rationales, mental barriers and patterned thinking.

Manufacturing versus service. A process improvement method originating on a manufacturing floor can naturally inspire skepticism in the service suite, where processes luxuriate, hibernate and overgrow in untended form. One study of service processes found that less than one-tenth of total process cycle time was spent on tasks that customers viewed as important. That means that however well conceived or

Fig. 2>> **Levels of Six Sigma Adoption**

24%

34%

5%

37%

1   2   3   4

What is your company's current level of
Six Sigma adoption?

1 Aggressive and company-wide
2 Growing within the company but excludes CRE
3 Within CRE but not company-wide
4 None

creative, nine-tenths of work product may have no value to the customer.

People versus process. "We don't invest in process," is one counterpoint. "We invest in people." In the Six Sigma view, people are inseparable from process, and in spite of abundant waste and error, the business world is not filled with people who intentionally do bad work but rather by good and capable people stuck in bad processes. When processes are repaired, people are energized and liberated to do the best work they can.

Beyond control. It is tempting to survey the myriad details, dynamic conditions, multiple parties and nuanced negotiations of a real estate transaction as beyond the control of process management. Opting out in this way overlooks the premise of Six Sigma. All processes have variances. Significant improvement lies in the subtle degrees of defining, measuring and narrowing the variance, not eliminating it.

The personality myth. Real estate performance can be driven by personality. Personality is indeed integral to service. Yet all personalities employ processes, which may be highly individualized and ritualized. Six Sigma develops people excellence as well as technical excellence. It cultivates creativity, innovation, communication and collaboration. The difference is that when systems are perfected, success is no longer incumbent on individual artistry or personality.

The hero syndrome. Brilliant and breakthrough work is accomplished every day. Ask yourself, though, how many of your most successful projects have been acts of heroism by a very talented team and not the result of a predictable, systematic process.

The curse of good enough. "We already do quality," this argument goes, offering an implicit warning. Self-satisfaction with current performance, no matter how robust, dulls awareness to potential improvement that remains for the taking.

Dismantling resistance can be challenging. However, once the arduous work of excavating and resolving internal resistance is accomplished, we have found that it is comparatively easy to take the next step and locate the storehouses of error and wasted effort in standard CRE processes.

Room for Error

Prior to improvement, administrative and service processes such as those in CRE typically range from 50 to 90 percent efficient. Efficiencies as high as the 90th percentile may sound reasonably adequate to the uninitiated yet represent a stunning number of failures and incalculable cost in dollars, time and dissatisfied customers. Other research has shown that poor quality – as reflected by rework, mistakes and false starts – can consume up to half of a total project budget.

Camouflaged by the normal course of business, statistics like these beg the questions: Where are your hidden errors and waste? If you could find and correct them, wouldn't you?

Finding them is rarely difficult. Wasted effort and errors are often hidden in the common allowances of everyday operations: inaccurate data, delayed response times, multiple rework loops and discretionary habits that become entrenched as office standards. A deeper examination of processes uncovers still other contributors to waste and inaction: unclear customer requirements, internal turf wars, non-value-added overwork and analysis paralysis.

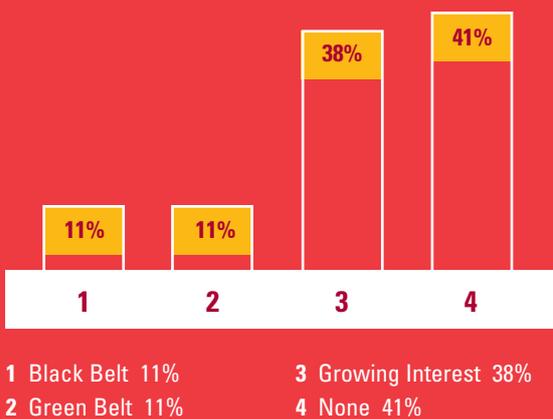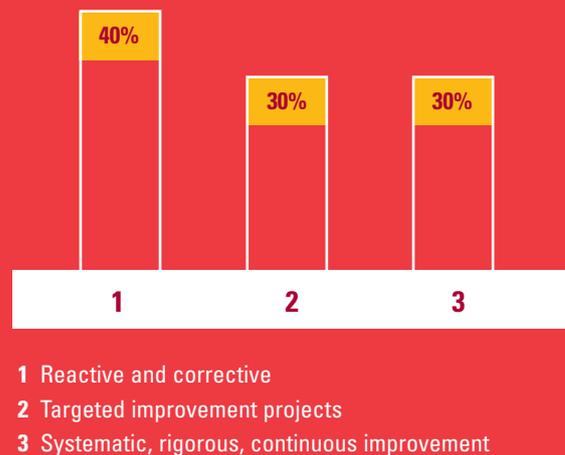Fig. 3>> **What is your personal level of Six Sigma adoption?**

	11%	11%	38%	41%
	1	2	3	4

1 Black Belt 11%   3 Growing Interest 38%
2 Green Belt 11%   4 None 41%

Fig. 4>> **Which of the following best describes the process improvement methodology within your CRE group?**

40%	30%	30%
1	2	3

1 Reactive and corrective
2 Targeted improvement projects
3 Systematic, rigorous, continuous improvement

◢ *Because of the repercussive impact of its results, how you apply Six Sigma in your organization is just as critical as where.*

Two processes that invariably yield ample room for improvement are the customer approval loop and work order management.
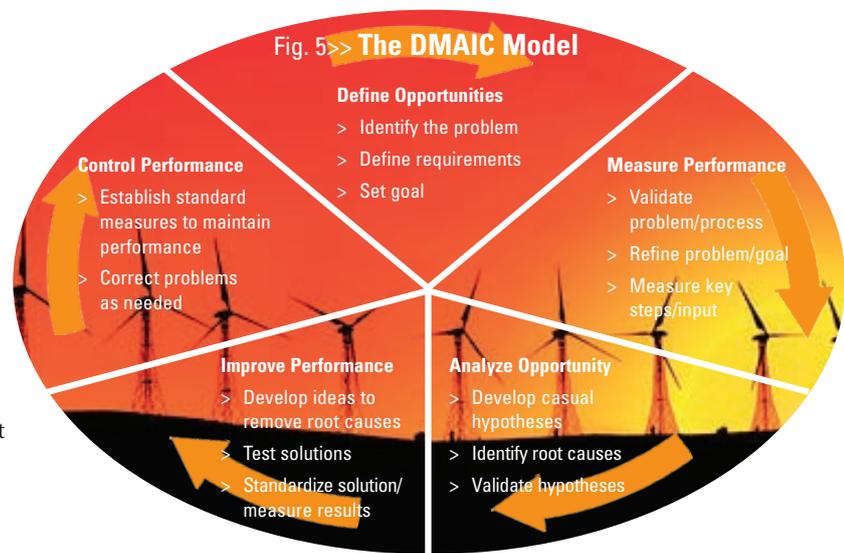
The internal approval process between CRE and the line of business (LOB) being served is a major source of rework. In one client case, the process of approving a statement of work to document the scope of a project build-out was examined in detail. The average document was conveyed seven times from CRE to the LOB for some level of approval. Each of those instances is a rework loop tying up the time of well-compensated executives on each end. We may take great pride in the quality of our work product and our customer relationships, yet when revealed, the amount of time routinely spent checking and rechecking work is surprising. Rework is inculcated into standard practice when people have no faith in a process. They assume that the only way to obtain the work they expect is to check and recheck it again.

Existing customer satisfaction metrics can also mask true performance and mislead into complacency. Through a feedback process, a large call center providing facility management to 100 bank branches could demonstrate 98 percent satisfaction on work orders completed. At a volume of 1,000 work orders per month, the call center averaged 240 instances per year in which customer requirements were not met. But it didn't rate those mistakes by severity or record the resulting cost of duplicative work or downtime, and so it had no meaningful data with which to measure and correct performance.

Preparing to Lead

Once the correct view and intentions are in place, CRE senior leaders should themselves undertake the Six Sigma training that is unique and self-fulfilling to the practice.

In our survey of senior executives of top CRE organizations, nearly 40 percent said their interest in Six Sigma was growing while fewer than 25 percent had personally adopted any level of Six Sigma training. (Fig. 3) With this fractional level of fluency, it follows that 40 percent of the same group described the improvement methodology within their own CRE groups as reactive and corrective rather than systematic and continuous. (Fig. 4) These organizations are likely missing opportunities to drive innovation with line of business and enterprise customers because they don't speak the language of breakthrough process improvement. The accompanying glossary is a guide to some of the foundational concepts and terms encountered as an organization moves toward process-centric thinking. [*See The Language of Six Sigma on page 7.*]

Fig. 5>> **The DMAIC Model**

Define Opportunities
> Identify the problem
> Define requirements
> Set goal

Measure Performance
> Validate problem/process
> Refine problem/goal
> Measure key steps/input

Analyze Opportunity
> Develop casual hypotheses
> Identify root causes
> Validate hypotheses

Improve Performance
> Develop ideas to remove root causes
> Test solutions
> Standardize solution/measure results

Control Performance
> Establish standard measures to maintain performance
> Correct problems as needed

In addition to its distinctive vocabulary, Six Sigma is notable for its cyclic form, speed and zeal.

The anatomy of improvement. What does Six Sigma look like? Most Six Sigma organizations use the five-step DMAIC (pronounced "da-MAY-ik") cycle for process improvement as well as for new process design. (Fig. 5)

The magic of action. What can appear on first glance as analytical drudgery should occur in an environment of speed and athleticism. Six Sigma favors sprints (projects that take months) rather than marathons (projects that take years) and is built on projects with narrow focus and relatively short timeframes. Action is a leadership tenet of Six Sigma. Learning by doing is the most effective method of training.

The perpetuating force of passion. As in all endeavors, success breeds success. The promise of radical accomplishment drives Six Sigma. Just as the passionate belief of a single engineer gave rise to the Six Sigma movement 20 years ago, the sustained energy and committed focus of a leader is what makes it work in any organization.

Underpinning these characteristics is an unwavering focus on the customer as the motivating force of all process improvement.

Customer-Driven Six Sigma

The pursuit of quality for its own sake may well be good, but in the realm of Six Sigma, it is far from perfect. The Six Sigma approach defines, measures and improves quality solely from the customer's point of view based on critical requirements. From that perspective, it becomes clear that some customer needs are under-met and some are over-met. Either case carries an imperative for improvement. If your way of doing

business isn't precisely what the customer needs to compete and win, it is too costly for both of you.

For the internal customer, Six Sigma success is strongly linked to strategic relevance. In evaluative studies, dissatisfaction with Six Sigma is higher when it is applied to low-level problems without relevance to an organization's overall strategy.

To advance real estate operations using Six Sigma, Jones Lang LaSalle has developed a customer-driven organizational improvement framework that propels performance. (Fig. 6) This framework links the following components to yield peak operational efficiency, financial benefits and continuous improvement:

Voice of the customer. Customer requirements are at the foundation of improvement efforts.

Performance metrics. Operationally driven performance metrics link customer requirements and continuous improvement.

Lean process design. Underpinned by customer requirements and guided by performance metrics, delivery processes are streamlined to eliminate waste, improve service and reduce errors.

DMAIC process improvement. The closed-loop process is used to drive continuous improvement.

Governance and leadership. Processes for monitoring and review are developed so a leadership team can ensure consistent application and achievement of customer impact.

With customer focus as an anchoring guide, an organization is equipped to begin the Six Sigma process.

Six Sigma to Start

Because of the repercussive impact of its results, how you apply Six Sigma in your organization is just as critical as where. There are several practical steps that foster early success and leverage the power of Six Sigma within an organization:

Step 1: Focus on a few key metrics

Pick two or three process metrics that determine the competitive value of your organization. Establish a data collection process and baseline measure. Watch for three months and decide the true cost of that performance. Here are some process metrics to consider:

Cycle time. When work is not moving through a process, it is idle and creating opportunities for error. Orders are lost, deadlines are missed and customers grow tired of waiting. Create a new sense of urgency in your organization and with your customers by measuring the speed of some critical processes. Picture a process so efficient that new construction start-to-
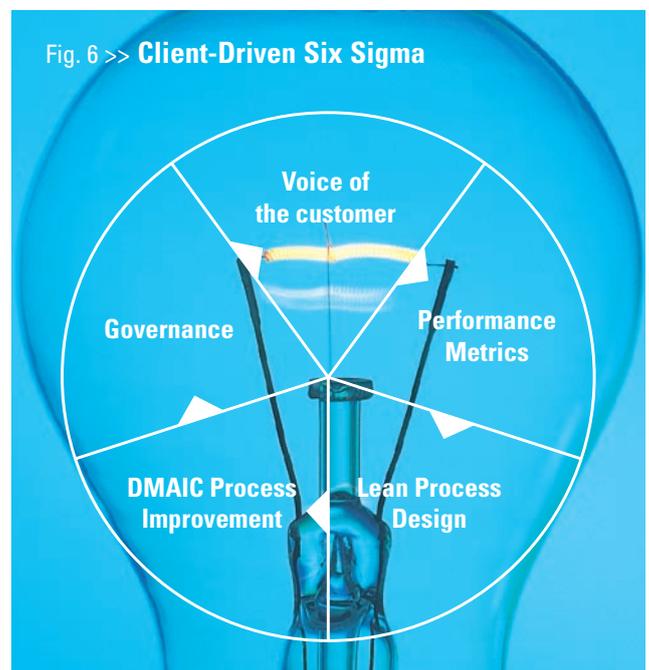
finish cycle times will be reduced by 30 to 50 percent and lease transaction approval cycle times will be cut by 50 percent.

First pass yield. Choose a critical work product and begin measuring how often a product gets through the entire process without errors or rehandling. You will be amazed at how low your first pass yield is. Try looking at how often customer inquiries are answered on the first call or work is submitted to customers without return for changes. Develop a system so effective that all call center requests are resolved on the first ticket, and all lease transactions move through "final review" in one single pass between reviewers and decision makers.

Rework. The true hidden cost in a service organization is the amount of work that gets handled two, three and four times before the customer accepts it. Start to measure the cost of doing things over and it becomes essential to get it right the first time. Six Sigma will empower you to eliminate the approve/reapprove loops in all of your transactions as well as to develop a move-add-change process with no changes after the initial move. There will be no time wasted for engineers to "return to shop" for parts, manuals or service records.

Step 2: Launch a serious improvement project

Select a process improvement target that would be meaningful to your customers and put seven of your best people on a team with a high-potential employee as the leader. Provide the team members with Six Sigma Green Belt training and the team leader with Black Belt training. Give them five months to solve the problem, review their work two times a month, get them coaching when they need it and demand results. Well-trained, well-coached teams achieve amazing results when leaders make up their mind that it's time to change.

Fig. 6 >> **Client-Driven Six Sigma**

Voice of the customer

Governance

Performance Metrics

DMAIC Process Improvement

Lean Process Design

The Language of Six Sigma

What does Six Sigma sound like? These frequently used terms convey fundamental concepts and applications.

Black Belt A team leader responsible for measuring, analyzing, improving and controlling key processes that influence customer satisfaction and/or productivity growth. Black Belts are full-time positions.

CTQ (Critical to Quality or Critical "Y") Element of a process or practice that has a direct impact on its perceived quality.

Customer Needs/Expectations Needs, as defined by customers, which meet their basic requirements and standards.

Defects Sources of customer irritation. Defects are costly to both customers and service providers. Eliminating defects provides cost benefits.

Green Belt Team leader similar to Black Belt but not a full-time position.

Master Black Belt A primary teaching role for mentoring Black Belts. Selection criteria for Master Black Belts are quantitative skills and the ability to teach and mentor. Master Black Belts are full-time positions.

Opportunity A chance to fall short of meeting requirements.

Performance Drivers Key activities, processes or subprocesses that have the highest impact on organizational performance.

Six Sigma A vision of quality that equates with only 3.4 defects per million opportunities for each product or service transaction. Continuous striving for perfection.

Value Drivers The combination of key performance drivers, personal interactions and behavior that collectively influences the client's perception of value.

Variance A change in a process or business practice that may alter its expected outcome.

APPROACHES & MODELS

CDSS (Customer-Driven Six Sigma) Six Sigma as the engine for a creating and managing a high-performance business system.

DFSS (Design for Six Sigma) A systematic methodology utilizing tools, training and measurements to design products and processes that meet customer expectations and can be produced at Six Sigma quality levels.

DMAIC (Define, Measure, Analyze, Improve and Control) A model for continued improvement. Systematic, scientific and fact-based, this closed-loop process eliminates unproductive steps, focuses on new measurements and applies technology for improvement.

▲ *Fully implemented, Six Sigma is likely to yield a 15 to 20 percent reduction in total occupancy costs, procurement costs and labor costs.*

As suggested earlier, two significant potential projects among CRE operations would be improving a transaction approval or work order management process.

Step 3: Install senior leadership

Gather senior leaders at least one day a month to seriously consider the implications of the data being collected and to make consensus decisions about activities that will improve the trends. Encourage them to step away from their functional areas of expertise and consider the good of the entire organization. It may seem arduous at first but remarkable changes will result within six months.

Where Six Sigma Leads

Fully implemented, Six Sigma is likely to yield a 15 to 20 percent reduction in total occupancy costs, procurement costs and

labor costs. No less tangible are the operational profits produced when existing CRE processes are freed from delays, waste and error to be performed as intended. Properties are maintained more effectively, projects completed predictably, expansions and rollouts kept on schedule, and competitive advantage secured.

The full benefit of Six Sigma comes with the transition to a process-based organization with process owners rather than functional experts. Organizations with firmly entrenched functional structures should recognize that within each function is a critical process awaiting improvement to drive breakthrough performance and higher customer value.

Six Sigma in Action: It's not What you Think

Jones Lang LaSalle has made a commitment to become the first real estate services company to fully adopt Six Sigma practices and training throughout its organization. To accomplish this, we have assembled an authoritative team of Six Sigma practitioners. This level of Six Sigma integration benefits our clients in several ways. As our own processes improve, they represent new benchmarks for the industry in efficiency and productivity. As our people develop with Six Sigma training, certification and experience, they represent a legion of experts who make breakthrough contributions on our customers' behalf.

Our first Six Sigma project, completed in 2003, proved the very premise of the discipline: Even well-founded assumptions about the source of a problem are often wrong and guesswork is no guide for making true improvement.

The project goal was to significantly reduce the cost of the processing a standard work order originating at the firm's Facility Line in Atlanta, a call center handling nearly 300,000 annual service requests from multiple client properties around the world. At the onset, the seven-member project team had keen hunches about the source of higher costs: the volume rerouted (non-value-added) calls; the length of time service agents spent handling calls; and overstaffing, among other possible causes.

Using the DMAIC improvement model, the team began identifying and measuring all the variables that impacted work order process time so that those variables could be reduced or eliminated. Data analysis, however, quickly disproved every one of the presumed causes of the problem until the true source of inefficiency surfaced: There was a significant variation in the number of calls each service agent handled per hour. Call metrics demonstrated that the difference was not in the kind of call or the customer, but with the agent, where individual performance output ranged from handling under five calls per hour to nearly twelve. Unexpectedly, this variable was shown to have the greatest impact on cost.

"Everybody's instincts were wrong, and that's the great advantage of the Six Sigma process. It makes sure you are focused on the right problem to begin with," says John Padgham, the Jones Lang LaSalle executive who served as team leader of the project. "Before you go after solutions, you must collect the data and prove that the problem you think you have is in fact the problem to solve. Six Sigma forced us to continue looking for the root cause after we had exhausted our intuitive knowledge."

Aiming to increase average hourly productivity from six calls to nine, the team implemented new monitoring tools to measure monthly agent performance and instituted a performance bonus system to reward high productivity. Within six months, productivity improved by more than 50 percent for an annualized cost savings of $540,000. Additional savings have been realized in the years since implementation, along with other efficiencies that were revealed and supported by the data analysis.

"Six Sigma showed us what to pay attention to so we could achieve our efficiency goals," Padgham says. "After we looked at all the variables impacting cost, we could position to provide clients far less costly services going forward."

About Jones Lasalle

Jones Lang LaSalle (NYSE: JLL), the only real estate money management and services firm named to Forbes magazine's Platinum 400, has more than 100 offices worldwide and operates in more than 430 cities in 50 countries. With 2005 revenues of approximately US $1.4 billion, the company provides comprehensive integrated real estate and investment management expertise on a local, regional and global level to owner, occupier and investor clients. Jones Lang LaSalle is an industry leader in property and corporate facility management services, with a portfolio of 923 million square feet worldwide. In 2005, the firm completed capital markets sales and acquisitions, debt financings, and equity placements on assets and portfolios valued at US $43 billion.

LaSalle Investment Management, the company's investment management business, is one of the world's largest and most diverse real estate money management firms, with approximately US $30 billion of assets under management. www.joneslanglasalle.com.

Jones Lang LaSalle has over 45 years of experience in Asia Pacific. With over 10,000 employees operating in over 30 markets across the Asia Pacific region, the company's team of experts is uniquely qualified to provide the quality advice needed for making quality decisions.

If you would like to find out how Six Sigma can benefit Corporate Real Estate, please contact our Six Sigma champions.

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