Cost Management Update

Published by the Cost Management Group of the IMA July 2002 ■ Issue No. 129

FORCES OF STRATEGIC CHANGE

By Joseph A. De Feo, President & Chief Executive Officer of Juran Institute

A new methodology called Innovative Design for Six Sigma™ (I-DFSS) can provide valuable competitive advantages to an organization. It creates better and faster designs for products and services that are capable of higher levels of performance more quickly and efficiently than is possible with any other method.

The methodology combines two revolutionary processes—Design for Six Sigma and The Theory of Inventive Problem Solving—in a synergistic way. It provides the ability to achieve extraordinary productivity gains and world class status by:

- Integrating concurrent engineering principles with Six Sigma design and data organizing tools
- Stimulating innovative thinking
- Solving design problems that appear to be insolvable
- Resolving contradicting design requirements
- Shortening lead times for developing new products, services, and processes
- Reducing rejects or errors
- Cutting costs
- Improving customer satisfaction by creating competitive, user-friendly products.
- Predicting evolutionary needs and trends efficiently and effectively

Every organization is continually striving to make product design cycles shorter. Doing this becomes imperative as technological advances require more frequent retooling and development. I-DFSS™ achieves this objective because it expands an organization's breadth of opportunities by matching technological, product, and service-oriented developments to customers and markets.

The methodology can be applied whether the issue is organizational; involves products, services, and customer needs; or to improve processes. It can produce results regardless of the state of the economy.

Components of I-DFSS™

1. Design for Six Sigma (DFSS)

DFSS is an established data-driven methodology based on analytical tools, with the ability to prevent and predict defects in the design of a product, service, or process.

It is part of a broad range of Six Sigma processes that identify and improve efficiency and quality in virtually everything an organization does throughout its worldwide operations.

Six Sigma has provided significant benefits to many companies, such as General Electric, Motorola, Honeywell, Samsung Electronics of South Korea, and Telefonica in Spain. It is helping these organizations and many others control costs; improve quality in products, manufacturing, and transactional processes (internally as well as for customer services); and increase the efficiency and productivity of complete supply chains. In short, Six Sigma is financially rewarding—with ROI ranging from 10:1 to over 100:1.

Implemented strategically, Six Sigma also:

- Helps turn over working capital faster
- Reduces capital spending
- Makes existing capacity available and new facilities unnecessary
- Fosters an environment that motivates employees
- Improves morale, teamwork, and career potential

2. Theory of Inventive Problem Solving (I-TRIZ)

A highly structured method, I-TRIZ (pronounced "I-trees") stimulates innovative thinking, which resolves intractable problems, eliminates technological barriers, creates new product features or services, and predicts new technologies, trends, and customer needs that involve the human element.

Built around three core competencies, I-TRIZ involves Inventive Problem Solving, Anticipating Failure Determination™, and Directed Evolution™. It has been demonstrated that these applications can analyze, predict, and eliminate failures.

A science that guides problem solvers toward optimal solutions for business and technological dilemmas, I-TRIZ is based on technology instead of psychology. It is a compendium of analytical and knowledge-based tools that serves as a systematic path to innovation and is capable of delivering reliable and repeatable results. Supported by a database of more than two million worldwide patents and an analysis of the evolution of technology throughout history, I-TRIZ provides objective, verifiable patterns and regularities that provide answers to complex questions.

Six Sigma's Basic Philosophy

More than just formal programs or disciplines, all forms of Six Sigma represent an operating philosophy and a culture that can be shared by customers, shareholders, employees, and suppliers. Widely different organiza-

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Inside

Achieving Leaner Accounting

By Gary Cokins, ABC Technologies

Just as the just-in-time (JIT) production management and demand-pull approaches have captured the interests of operations managers, to a much lesser degree, so has a cost measurement approach that some call *lean accounting*. It is designed to support lean thinking. One of the attractions of JIT material flow systems, such as the kanban foundation for the Toyota Production system, is they require much less paperwork and transactions. In effect, demand-pull and synchronous production systems have begun to displace the traditional batch-and-queue production approach.

Some of the advocates of JIT have extended their thinking beyond the material flow management space and into the cost accounting area, too. They are proposing that the effort to collect and manage all of the cost accounting records and transactions exceeds the benefits. They strongly suggest that, similar to the radical steps needed to accept JIT techniques, radical re-thinking and changes are needed for cost accounting and performance measurement methods. By removing unnecessary work, the accountants can achieve *leaner accounting.*

The Accounting Reforms to Support Lean Operations

Simplification is a cornerstone to lean production and lean thinking practices. With regard to the accounting department, since the measurement systems and workers will be more aligned with the processes rather than with the functional departments, lean thinking would prefer for some of the financial analysis to also be aligned by the process. (Remember that work activities *belong* to processes in the ABC/M process cost view.)

With regards to accounting information, the lean thinking advocates allow for some relaxation in accuracy and control.

The Impact of Leaner Accounting on the Accountant's Role

Lean thinking can and should be applied to support the finance and accounting processes. The quality management community refers to this as being "transactional lean," and leaner accounting is welcomed. Instead of accountants spending time recording and tracking data usually to update upper levels of management, much of the accountants' time can be shifted towards supporting process-based and continuous improvement teams. Ideally, the accountants would no longer reside under the finance function but will have moved into the high performance teams.

With regard to accounting transactions:

- On the procurement and payments side of the supply chain, financial transactions are reduced. Lean manufacturing advocates use of single-sourced suppliers and blanket purchase orders. The accounts payable system is automated using backflushing to determine vendor quantities used and electronic Internet payments.
- On the customer sales and accounts receivables side of the supply chain, the majority of customers are pre-approved and blanket sales orders are used. Payments are electronic using a pay-on-receipt or pay-on-usage method. Cash collection efforts are minimized since the customer, not the supplier, now triggers the event.

In short, close partnerships with suppliers, customers, and other third parties plus computer automation enables an organization to remove much of the traditional administrative waste.

With regard to the budget process (which is addressed in topics related to activity-based planning), the emphasis shifts away from managing spending against budgeted targets and toward "sense-and-respond " use of resources. However, budgets will long be with us, but with a fewer number of cost centers and a better understanding of the cause-and-effect cost driver relationships, the budgeting process will be easier. Ideally, better control results less from monitoring spending variances and more from accountants devoting more of their freed-up time with continuous improvement teams and from attacking problems at the source.

Risks of Going Overboard with Radical Accounting Reforms

A major tenet of lean thinking is that as the processes and value streams become more simplified, there is less need for financial accounting, control, and measurement systems. But if this notion is taken too narrowly, it can be misinterpreted as if there is less need for applying financial analysis in teams for decision-making. In fact, it is the reverse. The margin for error is getting slimmer, and teams need greater, not less, proficiency in using financial data.

The lean community detests a fragmented and departmentalized organization. By applying demand-pull scheduling logic, the lean folks have accomplished smooth material flow control of products or documents across the work-centers. It appears that some of the lean thinkers care to apply similar thinking to their cost accounting to reduce the amount of data collection. If taken to the extreme of "materials only costing" and a single factory-wide direct and overhead expense rate, however then any heterogeneity in equipment or in products is likely to result in over- or under-costed product costs relative to the product's true consumption of resource expenses.

What may be an even worse unintended consequence of over-simplifying the lean costing system is the loss of visibility to view hidden waste. Today's traditional costing systems already hide waste by not identifying low-value, added activity costs that are "baked into the standard costs." In short, all support costs are lumped into overhead. ABC/M resolves this by making support activity costs visible.

Ultimately we fall back on to the "Is the climb worth the view?" test. The cost assignment model's network design and architecture needs to be leveled up to a point where the *continues on page 3*

LEASE COMPLIANCE REVIEW: AN EMERGING TREND

By Donald F. Mokrauer, Alan Aronow, and Ann B.R. Mokrauer

Lease compliance review is the process by which a business compares the financial obligations contained within a commercial real estate lease against actual rental invoices. If errors are discovered, the amounts are properly computed and the accounts reconciled. Most corporate financial managers already possess the skills and business knowledge necessary to be that specialist.

How Significant Are Rental Occupancy Costs?

For most businesses, rental occupancy costs represent the second largest cost category, after payroll expenses. Yet, in practice, most tenants (including many sophisticated corporations with internal audit staffs) have a limited if not nonexistent ability to determine the accuracy of their rental occupancy cost invoices.

Since almost every lease is unique, lease-related invoices should be calculated for each tenant. With more than 40 billion square feet of leased space in this country, however, this would be impossible. Given the complexity of the task, it is not unusual for even the most honest and diligent landlord to commit billing errors. Without the skills to detect or correct these errors, tenants remain unaware of these overcharges and overpay their landlords on a routine basis.

Are Lease Compliance Reviews Complicated?

Because of the length and complexity of lease agreements, errors often occur in multiple layers. Finding the errors requires appropriate training and sophisticated analysis. The first layer consists of identifying all the different types of rental occupancy cost charges the tenant has to pay. These expenses run from base rent, percentage rent (for retailers), real estate taxes, CAM, operating expenses, and insurance. The next layer consists of identifying whether the landlord is prevented by the lease from passing on all expenses to the tenant. Other layers deal with the accuracy of the landlord's aggregate expense computation, the amount of a tenant's pro rata share, time frames, base period amounts, and escalation indexes. Errors in one layer often directly impact another.

Because of this complexity, all but the most sophisticated tenants are not capable of analyzing their landlord's invoices. Therefore, they simply pay their bills—whether correct or not.

Putting It into Perspective

We stand at the dawn of a new era, where corporate financial managers can develop the skills, support systems, and expertise to add lease compliance review consulting to the package of services offered to their companies. Equally significant, lease compliance review can serve as the platform that leads to a host of new real estate-related services for your organization. ▮

Leaner Accounting, *continued from page 2*

diminishing returns of extra accuracy for extra level of effort of work just is not worth the benefit.

In conclusion, lean accounting to support lean thinking is simply absorption costing, using the same principles of ABC/M. Lean accounting simply applies some common sense by understanding that costing is modeling, and all cost models are stylized based on the decision support purpose they are intended to serve. Leaner accounting involves removing some of the unnecessary work that generates little utility for the organization. Try not to confuse the two as being the same thing. ▮

Strategic Change, *continued from page 1*

tions adopt Six Sigma for the same compelling reasons: it is customer-focused, drives out waste, raises levels of quality in products and customer services, creates career opportunities for employees, and has a favorable impact on the bottom line.

Six Sigma's target for perfection is no more than 3.4 defects, errors, or mistakes per million opportunities, whether they involve the design and production of a product or a customer-oriented service process. It is from this target that the "Six Sigma" name originated. Usually written as a small sigma σ in the Greek alphabet, it is the symbol used to denote the standard deviation or measure of variation in a process.

The greater the number of sigmas within specifications, the fewer the defects. The smaller the variation, the lower the cost. Most organizations operate at the Three Sigma level, or about 66,000 defects per million opportunities for most of their processes, and a Four or Five Sigma level in some of the mission-critical processes.

It is neither desirable, productive, nor efficient to reach Six Sigma levels of performance for every process. Not all processes are equally important. What really counts is significant improvement in the mission-critical areas as defined by customers.

The cost of chronic waste, the cost of poor quality (COPQ), accounts for about 25% of annual sales for most companies. Most of this waste is hidden because traditional accounting systems do not measure waste adequately. What is visible and accounted for is the tip of the iceberg.

Training and consulting in I-DFSS™ is available only from Juran Institute.

All that is known for certain about the future is that it will be different. Products, organizations, skills, and attitudes that serve a business well today may have little relevance under the conditions of tomorrow. To survive, a business must change. The change must be timely and meet future customer needs. I-DFSS™ helps to accomplish these results.

The healthy and productive cultural changes I-DFSS™ brings about take time to complete. They are not free. Using the process requires a commitment to provide resources and employee training. The benefits that result, however, could be critical. They include productivity gains; product innovation; higher quality levels in products, processes, and services; customer satisfaction; improved asset utilization; margin expansion; increased market penetration; revenue growth; employee satisfaction and pride; and a highly competitive enterprise that is profitable with a significant return on investment. ▮

COST MANAGEMENT UPDATE
10 Paragon Drive
Montvale, NJ 07645-1760

FIRST-CLASS MAIL
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Permit No. 79

Cost Management Update

Cost Management Update© (ISSN 8756-5676) is published monthly by the Cost Management Group of the Institute of Management Accountants, 10 Paragon Drive, Montvale, NJ 07645-1760; 1-800-638-4427; **www.imanet.org**

POSTMASTER: Send address changes to IMA, 10 Paragon Drive, Montvale, NJ, 07645-1760. First-class postage paid at Montvale, NJ and other mailing offices.

Printed by Action Graphics, Inc. in Lincoln Park, NJ.

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Q & A from the Internet — CAPACITY ASSUMPTIONS

Q *We are currently trying to build new capacity assumptions for standard burden setting. Under our old assumptions, we used a straight 2 1/2 shift, 5-day capacity per machine. The problem is we run nowhere near that. We have reduced volumes that do not show any ability to rise significantly for the foreseeable future, and we are outsourcing much of our manufacturing process. This leaves us with many old machines that are kept around because we have the space and because we use them for low-volume runs and as backup for foreign vendors.*

How would you approach this analysis? Is there something I can read that would give me general capacity theories?

A I would challenge why you are outsourcing your process when you have available capacity internally. Most likely, someone through cost allocations determined it was cheaper to outsource, when in reality it may be cheaper to do it yourself and still get the quality you need. The IMA has Statements on Management Accounting located in the Publications & Research Section of their website (www.imanet.org) that are available to download. Two that come to mind are SMA 4HH – Theory of Constraints (TOC) Management System Fundamentals and SMA 4LL – Implementing Capacity Cost Management.

You may use less capacity to arrive at a burden rate (using for inventory valuation purposes). However, don't fall into the cost allocation trap to determine your true profitability of running different products. The first step I would take is find out why you are outsourcing. And if you have the expertise, bring it in house. If you don't have the expertise, find out what it would cost to bring in and train someone. Then do a cost/benefit analysis. The above SMAs are good introductions to the topics. ■