

# PEAK Advantage

Performance  
Enhancement  
Advice &  
Knowhow

## Lean thinking + lean accounting = activity-based principles that can help trim 'muda'

by Dave Schmitt, Indianapolis,  
dschmitt@bkd.com

One of the most powerful, useful concepts applied in manufacturing and distribution is "lean thinking," which is based on doing more with less by eliminating any human activity that absorbs resources but creates no value. Such activities also are referred to as "muda."

Lean thinking follows five basic principles<sup>1</sup> that allow you to:

- Specify value or what the customer actually buys from you
- Identify a product's value stream
- Make value flow without interruption
- Let the customer pull value from the producer
- Pursue perfection

Results from effective lean thinking can be tremendous: reduced costs, increased capacity, reduced inventory balances (in all categories, *i.e.*, raw, in process and finished), shorter lead times, reduced scrap and improved deliveries.

When applied appropriately, lean thinking can bring substantial improvements to any organization's operation.

### Pair lean thinking & lean accounting methods

As more companies undertake lean initiatives, new ideas link lean thinking and accounting.

Lean accounting<sup>2</sup> concepts include simplifying costing practices and focusing almost all costs on an organization's value streams.

To apply lean thinking to their manufacturing operations, some companies create cells or lines that include all the operations needed to produce a family of products. The cell or line then forms the value stream's focal point.

Upstream from the cell or line are activities that include design, engineering, sales, marketing, purchasing, receiving, quality, put away and storage.

Downstream are activities that include customer support, finished goods storage, picking, packing, shipping, logistics, billing and collections.

Pooling the costs of these activities into the value stream might work just fine if all products:

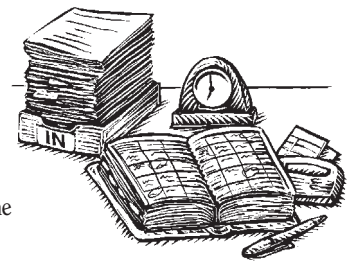
- Are manufactured from the same materials
- Require the same design and engineering effort
- Demand the same marketing and sales effort

- Require the same post-manufacturing handling and storage
- Are packed and shipped in the same quantities
- Are purchased by customers that behave identically and routinely pay their bills

Small variations in these activities are probably too immaterial to make a difference; however, that is rarely the case. Ask yourself:

- If the engineering and design efforts that support new products are the same for every product, will the life-cycle volume of each new product be the same?
- Because product engineering and design efforts often differ, can a product's contribution be measured if one-time costs are buried in a value stream cost pool?
- What is gained by burying customer-related cost differentials in a value stream pool? That some customers or markets are harder sells than others is another factor to consider.

The same cells and lines are usually used to make products from a variety of materials that don't all require the same amount of support.



Purchasing, receiving, quality and premanufacturing handling are seldom the same for all materials and components; therefore, assign far less cost to products made from high-volume materials that require very little support per unit of material than you would to those made from low-volume, specialized materials that require a lot of support.

A product with purchased components will require much more support than one with no components. Yet, under the "all-costs-to-the-value-stream" scheme, these costs are buried and lose their cause-and-effect rela-

*continued on page 4*



April 2005

## E-subscribe to PEAK Advantage

An e-subscription to PEAK Advantage is free, just a click or two away and has live links, both to writers' e-mail addresses and to every URL our articles and items reference.

There's no need to act if you're happy with your current subscription, but to receive your next issue electronically, follow the simple online sign-up instructions at [www.bkd.com/enews/](http://www.bkd.com/enews/).

Your e-mail address and other personal information will always be kept in strict confidence and will never be sold to vendors or shared with anyone outside BKD.

## On the Web

National Association of Manufacturers [www.nam.org](http://www.nam.org)

American Society for Quality [www.asq.com](http://www.asq.com)

American Society of Mechanical Engineers [www.asme.org](http://www.asme.org)

Association for Manufacturing Excellence [www.ame.org](http://www.ame.org)

BKD manufacturing audit, tax & consulting [www.bkd.com](http://www.bkd.com)

Data Interchange Standards Association [www.disa.org](http://www.disa.org)

Educational Society for Resource Management [www.apics.org](http://www.apics.org)

ESS China [www.esschina.com](http://www.esschina.com)

Expatriate Assignment Solutions [www.expatsolve.com](http://www.expatsolve.com)

Hudson Institute, America's premier source of applied research on enduring policy challenges [www.hudson.org](http://www.hudson.org)

International, global access-local support [www.mri-world.com](http://www.mri-world.com)

Leadership in Manufacturing [www.industryweek.com](http://www.industryweek.com)

American National Standards Institute [www.ansi.org](http://www.ansi.org)

## Audit & Accounting

### Inventory costs feel FASB standard's effect

by Michelle Mahoney, Springfield, [mmahoney@bkd.com](mailto:mmahoney@bkd.com)

The Financial Accounting Standards Board has recently issued Statement No. 151 (FAS 151), *Inventory Costs - an Amendment of ARB No. 43, Chapter 4*.

This pronouncement requires abnormal freight and handling costs and all wasted materials (spoilage) be recognized as current-period charges rather than as a portion of inventory cost.

In addition, it requires allocation of fixed production overheads to inventory be based on normal capacity of the production facilities.

**FAS 151 is effective for inventory costs incurred during fiscal years beginning after June 15, 2005.**

#### Time for action?

This recently issued pronouncement may have a significant impact on your financial statements, making it important to evaluate the new guidance early to determine if additional action is required to avoid unintended consequences.

Contact your BKD Manufacturing & Distribution Group advisor for more information about this or other standards. □



## Retail supply seminar blends compliance & technology tips

If you're a retail supplier, a free seminar in June will offer information about compliance standards and the technology designed to help you.

**Winning with Retail Compliance: The Race for Competitive Advantage in Today's Supply Chain** is the topic for the Consumer Packaged Goods and Retail Compliance Spring 2005 Seminar Series, sponsored by Microsoft Business Solutions and BKD Technologies.

As retail suppliers are required to meet increasingly demanding compliance standards, consumer goods distributors and manufacturers must focus attention on trading partner compliance while providing near perfect order fulfillment at the lowest possible cost.

This free three-hour seminar will explore the best practices of winning consumer-goods suppliers who sell to retailers in today's demanding environment.

At this event, technology experts will help you learn how to:

- Apply technology to support identified best practices of winning retail suppliers
- Implement faster and efficient ways of sharing fulfillment information
- Consistently execute compliant orders and learn to better manage inventory and shipping requirements with the latest technology
- Showcase compliance capabilities to win new business
- Use RFID (Radio Frequency Identification) to improve supply-chain visibility

**The seminar will be offered June 8, 2005, in Kansas City, Kansas, and June 9, 2005, in St. Louis, Missouri.**

For more information, contact Delia Croessmann, BKD Technologies, at 417 865-8701, ext. 304 or [dcroessmann@bkd.com](mailto:dcroessmann@bkd.com). □



## Tax Tips

### Deduction for qualified production activities: you may be eligible

by John Matthiesen, Merrillville, [jmatthiesen@bkd.com](mailto:jmatthiesen@bkd.com)

The American Jobs Creation Act of 2004 (Jobs Act) offers a new deduction available for tax years beginning in 2005, and manufacturers should take note.

The new deduction for qualified production activities provides a deduction for a percentage of business income earned from U.S. manufacturing and certain other U.S. production activities.

The deduction is equal to the lesser of "qualified production activities income" or taxable income multiplied by 3% for 2005 and 2006, 6% for 2007-2009 and 9% thereafter.

The deduction is further limited to half the business's total W-2 wages for the year and is available to corporations, partnerships, sole proprietorships and other taxpayers, regardless of whether the products are exported.

Special rules apply to contract manufacturers and imported goods further processed in the U.S.

For more information, contact your BKD Manufacturing & Distribution Group advisor or visit <http://www.bkd.com/industry/Manufacturing&Distribution/>. □

# Reverse auctions: learn rules first

by Herb Hanselmann, Indianapolis,  
hhanselmann@bkd.com

Many people are familiar with online auctions sponsored by eBay, Amazon and Yahoo, but reverse auctions (RAs) are likely a different story.

RAs are used to purchase both complex and simple goods and services. In recent years, large organizations, like Home Depot, General Electric and the federal government's General Services Administration, have used RAs to improve purchasing processes and reduce costs.

Participants have experienced large cost and large margin reductions, some unethical practices and changes in supplier-customer relationships. Your experience largely depends on how the RA is used.

## How RAs work

RAs are simply automated competitive bidding processes where a buyer publishes a request for proposal (RFP), distributes it to selected suppliers and invites them to e-mail their bids on supplying a specific product or service.

The RFP also describes the rules of this process, including the time, duration of bidding and the minimum bid increment. At an appointed time, bidders submit their bids via an Internet-based service located at a bid web site.

In most cases, bidders may improve their bids during the auction. Depending on the RFQ rules, the auction service provider will not display information about bid standing (as in a sealed-bid competition), bid rank or low-bid amount (as in an open auction).

As "reverse" implies, bids go down to improve a bidder's price standing. When bids are finally evaluated, contracts are awarded, and the lowest price may win.

## Who benefits?

Sellers and buyers find RAs useful when selling excess inventory, identifying prospective suppliers or learning an item's market price.

RAs help source items ranging from commodities to specialized equipment and services. Buyers benefit from lower prices, shorter purchase-action time, purchase-process efficiency and more explicit, objective purchase decisions.

Sellers may benefit from shorter sales cycles, faster contract awards and the ability to focus on real buyers.

## Learn rules

To improve their odds, sellers and buyers must pay close attention to every detail. Written and unwritten rules of conduct apply. Clues to the unwritten rules and goals are often found in print and may define an auction's character in three ways:

1. What creates revenue for the market maker fees per transaction, commissions on value, subscriptions or some combination
2. How is the auction conducted and what are its rules, *i.e.*, how is bidding conducted; what information is reported and when; what communications take place among participants
3. What does the auction structure imply; event factors and practices also generally affect an auction's action

Number two refers to several major auction models currently used by Internet markets:

- English or ascending auction, *e.g.*, Sotheby's, Christie's, eBay
- Dutch or descending auction
- Sealed-bid auctions
- Double auction for price and quantity (either sealed bid or open outcry)

Number three refers to event factors and bidding practices:

- The more bidders there are, the more intense the competition
- The winning bidder of a single unit may only win a partial quantity in multiple-unit auctions
- The offering price often drops as the auction progresses
- Sellers make a trade-off between the cost of holding inventory and releasing it
- Compared to personal inspection, digital descriptions and photos may not provide full assurance of the quality or condition of goods offered
- Longer auctions (3-10 days) tend to attract more bidders, but shorter auctions (10-120 minutes) allow more complete transactions
- Speed (starting and ending points and bid increments) affects prices differently in Dutch and English auctions

Market and auction designs can be tricky. The best ones may be works in progress that include few commonly accepted best practices and features.

Before you participate, know how different designs will affect your organization. Experience will probably be your best teacher.

## Prepare to sell, prepare to buy

If you are a first-time seller, learn about the bidding process. Some buyers offer mock bids to help sellers learn the mechanics of the process, and some auction service providers, like **HedgeHog** and **IASTA**, assistance for varying levels of expertise.

It's important for sellers to manage their participation carefully and avoid underbidding, which jeopardizes both seller and buyer.

To choose the proper purchas-

ing tool, view your purchases according to their nature. Misusing a tool may have unfortunate consequences.

For example, a company might use an RA for all its major-spend items and see savings in the first year, but they may not see them in the second. In fact, RA costs might be higher than returns in the second year, and the performance of some suppliers could slip.

RA has its place, especially when it is used to solve the problems or aid the situations it is meant for.

To help your company conduct or participate in higher-quality RAs and those with lower costs per transaction, use traditional practices of good and fair purchasing:

- Provide clear, complete description of work
- Treat supplier information as proprietary
- Identify all bidders
- State clear, complete terms and conditions, including any incumbent-vendor special rights
- Set the same contractual obligations for buyer and seller for acceptance of contract
- Describe clearly the criteria for selecting a winner
- Report RA results to sellers within a specified time

## Expectations & goals

RAs are no longer the province of large organizations, and many participants have built experience to base their expectations and goals.

Published savings percentages fall within a wide range depending on a number of factors your experience with RAs will teach you.

Contact your BKD Manufacturing & Distribution Group advisor for help preparing for and participating in an RA. □

## Lean thinking + lean accounting...

*continued from page 1*

tionship with the products they support.

### Don't bury costs in value stream

The journey products make after leaving a cell or line is seldom the same. Some go directly from the last operation onto a truck for shipment. Others are stored, then combined with other products for shipment.

Still others are held in inventory until orders or releases are received. They are then picked, consolidated with other products, packed and shipped.

Under the proposed costing scheme, when these costs are buried in the value stream, they lose their connection with the products and/or customers that generated them.

Generalizations and averages not only distort the cost of products and customers, they also make it difficult to direct lean initiatives to resolve the most costly muda.

This is because they include activities that represent muda, activities that wind up in the same pool as value-adding activities, but there are no markers to distinguish them.

Lean initiatives are not free; they require an investment of time and resources. Consequently, each

initiative should be subject to the same evaluation as any other investment. If you cannot measure the expected benefit of an action, how can you justify it?

For example, mass customization is a lean initiative that can greatly reduce costs at many organizations because it eliminates nonvalue-adding activities. Yet, because they cannot forecast its benefits with any certainty, many companies never investigate this course of action.

Over-generalized costing methods and the value-stream costing scheme bury the costs of having too many different raw materials and components.

According to mass-customization experts, one of the biggest obstacles to companies that take advantage of this powerful concept is the inability to accurately measure its benefits. This makes implementation difficult to justify and accomplishments difficult to measure.

Ironically, this suggests the value-stream costing scheme is more an obstacle than an aid to undertaking and executing lean initiatives.

Other examples include companies that have justified a more cellular manufacturing method only after measuring the cost of in-process movement and storage.

Some companies can eliminate a lot of muda from their fulfillment activities but only after measuring the costs of processing orders and storing, picking, packing and shipping finished products.

Muda-eliminating ideas are possible when nonvalue activities are visible, not buried in a pool of other costs.

### Results of lean initiatives

Finally, lean enterprises are not exempt from the laws of economics. They will still lose money if products or services are priced inappropriately. They will still waste scarce capital resources if they are invested in low-return projects and equipment.

Accurate, relevant cost information is critical to the long-term success of both lean and nonlean organizations.

Lean initiatives result in a more efficient, lower-cost company, but it must still compete in a world where other organizations also are getting lean. It must still base critical executive decisions on an economic model that is a valid depiction of its new, leaner construction.

Only by using the framework found in activity-based principles can such a valid model be developed, one that allows a lean organization's decision makers to effectively exploit the competitive

advantages that can result from lean initiatives. □

1. Womak, James P. and Jones, Daniel T., **Lean Thinking: Banish Waste and Create Wealth in Your Corporation** (New York, Simon & Schuster, 1996)

2. **Lean accounting** has two definitions: (1) accounting for the lean organization and (2) making the accounting function itself "lean." This article relates to the first.

#### About PEAK Advantage

The content in this newsletter comes from sources BKD believes to be reliable and authoritative; however, to apply specific information to your situation requires careful consideration of all the facts and circumstances. Please consult your BKD advisor before acting on any matter covered in this newsletter.

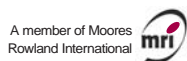
To change your mailing information or to add your name to our mailing list, call the communications specialist at the BKD office nearest you or call our administrative office at 417-831-7283. To inquire about topics covered in this newsletter, contact your BKD advisor or Jan House at 417-831-7283 or [jhouse@bkd.com](mailto:jhouse@bkd.com).

©2005 BKD, LLP All rights reserved



P.O. Box 1900  
Springfield, MO 65801-1900

For a complete list of our offices and subsidiaries and their contacts, visit [bkd.com](http://bkd.com) or contact the communications specialist at the BKD office nearest you.



PRSR STD  
US POSTAGE PAID  
SPRINGFIELD MO  
PERMIT #801

Address Service Requested