

# the agile digest

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### DIGEST UPDATED:

Welcome the first issue of the *Agile Digest* and the latest chapter in our continuing coverage of Lean leadership. With Lean extending beyond the borders of manufacturing, *Manufacturers' Digest* no longer captured the full extent of our coverage and so was gracefully retired. We have also expanded our format to include more articles, interviews and book reviews. As always, we look forward to hearing from you, so please keep the feedback and story ideas coming.



BY TED STILES

### WHAT DO YOU GET WHEN YOU CROSS WALL STREET WITH THE SENSE?

**ANSWER:** The Ironwood Manufacturing Fund. The first exclusively Lean-focused fund of its kind, Ironwood targets and invests in companies whose performance can be dramatically improved upon through the adoption of Lean management systems. To those familiar with the benefits of Lean, the concept makes perfect sense. Perhaps the only question is, what took so long?

Fund co-founder John Cosentino sits across the table from me for the second time in nearly three years. Our first meeting took place in 2001, shortly before he chose to terminate his fund's initial launch. "The timing wasn't right," Cosentino says, reflecting on the investing environment of three years ago. "The economy was failing fast and private equity investing was slowing dramatically." If there's any dejection over the false start, Cosentino doesn't show it. "I'm glad we waited," he explains. "The timing is much better now in all respects, and the Lean investment strategy is as relevant as it has always been." He is as confident as ever, since the past couple of years have fortuitously allowed him to fine-tune the investment strategy and bring even more talent and resources on-board.

Indeed, Ironwood's most unique assets are the experience and skill-sets it now combines. The fund brings together the private investing expertise of partners Paul Balser and Michael Jackson but also boasts an all-star Lean lineup, at the

center of which sits Cosentino. His executive management experience reads like a Lean plant tour itinerary. Perhaps most notably, Cosentino was group executive at Danaher during the development of the Danaher Business System (the country's first Lean business system, and arguably one of the most successful). His other positions include director (and shareholder) of the Wiremold Company; President of United Technologies' Otis Elevator, North American Operations; and head of worldwide operations for the Stanley Works. In each case, Cosentino led or participated in the implementation of the company's Lean system.

At the advisory board level, there are additionally such proven Lean leaders as Orest Fiume, Art Byrne, and Karl Krapek. These members will serve in an advisory role to the management of the portfolio companies. Supporting this group are dozens of experienced Lean operating executives and consultants who can selectively act as directors, advisors, and executive management for the portfolio companies.



A LEADING SUPPLIER OF BANDSAWS, CUTTING TOOLS, AND INDUSTRIAL KNIFE PRODUCTS FOR GENERAL INDUSTRIAL AND WOOD MARKETS.

Simonds International, Ironwood's first portfolio company, meets the fund's investment criteria fully. The company is the product of the recent merger of Simonds Industries and International Knife and Saw, a combination that is highly complementary in terms of product lines, customer base, and geographic end-markets. With the merger, Simonds International has a leading market share in each of its product categories.

Simonds International has a Lean-experienced management team and a Lean-committed shareholder group and board of directors. It has begun its Lean business system implementation (the Simonds operating system), which will be strengthened and extended across the entire merged businesses. Implementation is supported by a dedicated *kaizen* office as well as the leading Lean consultants. Ironwood is particularly bullish on the potential Lean gains in all areas of business performance – growth, asset utilization, and profit margins – where Simonds International's management has established targets to double revenues, working capital turnover, and profitability over the five-year planning period.

Collectively, this A-list of Lean leadership hails from Cosentino's industrial alma maters. Commenting on the assembled talent, Cosentino is sanguine. "That's why this model works so well," he explains, "We've brought together the primary authors of some of the most successful Lean implementations in the history of American industry. The Lean experience pedigree and management experience is as good as it gets."


Since its first closing in July 2003, the fund has invested in Simonds International, its first portfolio company [see sidebar], and is currently seeking other companies to invest in and work with. Cosentino and his partners are looking to provide equity capital for buyouts, recapitalizations, and growth. They prefer to invest alongside existing ownership and management. Investment opportunities must meet certain well-established criteria, some key ones being:

- Revenues up to \$250 million/Enterprise values up to \$100 million
- Operationally stable but under-performing businesses (not turnaround situations)
- Proprietary products or services (vs. contract manufacturing)
- Experienced, competent management teams committed to Lean management systems
- Products that can be differentiated on bases other than price (i.e. not commodities)
- Broad, de-centralized customer base
- Fragmented markets with room for future acquisitions

This last point is critical to the fund's growth strategy. Everyone agrees that there is clearly tremendous ROI from Lean implementation alone. However, once the Lean program is on track at the platform company, the returns multiply when complementary businesses can

**"WE'VE BROUGHT TOGETHER THE PRIMARY AUTHORS OF SOME OF THE MOST SUCCESSFUL LEAN IMPLEMENTATION IN THE HISTORY OF AMERICAN INDUSTRY."**

be successfully adopted into the mix. "Acquired companies," says Cosentino, "will bring benefits in terms of market share increases, product line extensions, expanded channels of distribution, and very attractive incremental profitability."

If it all sounds a little intense, that's because it is. As many readers know, transforming only one organization to Lean can be challenging. However, it's difficult to think of a more prepared team for the task than Ironwood's. "Our task now," says Cosentino, "is to find investment opportunities that meet our criteria, and to build our base of Lean-experienced managers." In the coming issues of this publication we will revisit with Cosentino to offer updates on this groundbreaking fund. In the meantime, any readers that would like to contact the Ironwood Manufacturing Fund may call John Cosentino at 860.409.2103. 

the agile digest

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PUBLISHED BY:

Stiles Associates, L.L.C.  
for limited national distribution.

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## REAPING THE HIDDEN BENEFITS

- **Goodrich Corporation's** Chula Vista, California facility reduced its manufacturing footprint by about 50% through inventory reduction and improvements in factory flow and linkage, creating commensurate reductions in heating and lighting energy use and associated emissions of air pollutants and greenhouse gases. Numerous companies have found that Lean enables them to expand production while shrinking manufacturing floor space, avoiding the environmental impacts (not to mention the capital costs) linked with facility expansion as a means to accommodate growth.
- Implementation of reusable kanban at **Boeing Commercial Airplanes Group** to facilitate one-piece flow for 747 wing sets had the added benefit of eliminating 350 cubic feet of cardboard and bubble-wrap waste per wing ship set.
- 3P innovation at **Apollo Hardwoods** is enabling the company to use a wide variety of log grades in its manufacturing of cherry wood veneer panels, reducing input costs and operational flexibility while putting less strain on hardwood forest resources in Pennsylvania.

## LEAN & GREEN:

TODAY'S LEAN ORGANIZATIONS ARE SAVING MORE THAN JUST MONEY

By Tim Larson

The business case for “going Lean” has just gotten stronger. Recent research sponsored by the U.S. Environmental Protection Agency finds significant environmental benefits associated with Lean implementation. Numerous case studies are highlighted in two recent reports that can be found on EPA's new Lean & Environment website (see <http://www.epa.gov/innovation/lean.htm>).

Though environmental improvement is seldom considered in the business case for Lean implementation, the case studies show adverse environmental impacts are embedded in the Seven Deadly Wastes targeted by Lean. And while many companies are just beginning to measure the environmental performance outcomes resulting from their Lean initiative, the results look like a win for business and for the environment.

The EPA is clearly encouraged by the correlation but is hoping to convince businesses to more proactively include environmental improvements as a specific focus of any Lean implementation plan. While many environmental performance benefits come along for the ride with Lean initiatives, **HERE ARE THREE IMPORTANT REASONS WHY EXPLICIT CONSIDERATION OF THE LEAN-ENVIRONMENT RELATIONSHIP CAN LEVERAGE EVEN GREATER BUSINESS VALUE.**

### UNCOVER HIDDEN ENVIRONMENTAL WASTE

There is one type of waste that is not explicitly addressed by the Seven Deadly Wastes and that often goes unaddressed by Lean initiatives—environmental risk. While Lean is terrific at driving down the volume of material wastes and chemicals, the risk that materials and chemicals pose to human health and the environment is rarely considered during Lean activities. Yet the risk of chemicals and materials used can necessitate an elaborate system of non-value-added support activities—worker health and safety protections, regulatory compliance management and reporting activities, and pollution control equipment, among others. Air pollution control equipment and waste water treatment plants represent the largest monumen- tal processes and muda in some plants.

While the goal of eliminating environ- ment risk from a value stream needs to be weighed with other Lean goals such as time, quality, and cost, there are often opportunities to reduce environmental

risk while strengthening Lean results. One Lean company found that it was able to secure a \$60 million contract with the State of California under its strict new environmentally-preferable purchasing guidelines by making minor modifications to reduce formaldehyde off-gassing from its products. By consid- ering environmental risk when assembling Value Stream Maps and implementing *kaizen*, 5S, and 3P improvement events, companies can often uncover compelling opportunities to further enhance the business value of their Lean initiatives. After all, what customer *wants* to pay for environmental risk?

### ACHIEVE LARGE GAINS FROM LEANING ENVIRONMENTAL PROCESSES

As companies make progress on their Lean journeys, some begin to apply Lean thinking to various environmentally sensitive processes, such as chemical and waste management. Companies have

found that as much as 40% of their chemical supplies were going directly into the hazardous waste, as they expired on the shelf or became obsolete.


Goodrich Corporation found that purchasing chemicals as they needed them in right-sized containers made more sense from a Lean perspective than buying cheaper bulk chemicals and managing the risk and compliance burden of carrying large chemical inventories. Applying Lean thinking to waste management has yielded dramatic savings for other companies, while simplifying regulatory compliance obligations and reducing risk.

### AVOID REGULATORY OBSTACLES TO LEAN

Transform your company's environmental division into a value-adding team that supports Lean implementation initiatives. Involving plant environmental professionals early in Value Stream Mapping and other Lean activities can help companies identify

improvement opportunities, prevent pollution and associated compliance costs, and avoid potential regulatory and permitting obstacles to Lean implementation.

Recent regulatory innovation activities have pioneered new approaches to regulatory requirements that are responsive to Lean needs to make rapid, iterative changes to manufacturing processes, equipment, and materials. For example, the EPA's Pollution Prevention in Permitting Program (P4) has developed air permits for companies such as Intel and 3M that facilitate rapid operational changes. In addition, information is growing on effective approaches and tools to apply Lean to environmentally sensitive processes—such as painting and coating, metal finishing, cleaning and degreasing, and chemical treatment.

Exploration of the opportunities for Lean and environmental initiatives to complement each other is at an early stage, yet progress is being made. More and more Lean companies are integrating their environmental management systems into their Lean systems. The EPA has established an agency-wide Steering Committee to guide government efforts to support companies in getting greater environmental benefits from their Lean initiatives. And some state environmental protection agencies, such as the Iowa Department of Natural Resources, are even applying Lean techniques to improve their permitting programs. The results of these initiatives promise to be good for both business competitiveness and environmental quality. 

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## LEAN BOOKSHELF:



**Lean Lexicon:**  
*a graphical glossary for Lean Thinkers*  
(Lean Enterprise Institute)

Grasping the language of Lean can present a challenge for companies in the transformation process. Terms such as Heijunka, Jidoka, and Muda are all Greek to the Lean newbie. Thankfully, this book offers some clarity.

Demonstrating the Pull Production concept, *Lean Lexicon* was compiled based on market needs as determined by surveying the Lean community. Not surprisingly, the survey indicated that time-related concepts are most often misunderstood. Therefore, the book devotes ample coverage to clarifying such terms as cycle-time, takt-time and value-creating time. In addition, *Lean Lexicon* also covers the standard terms and concepts one would expect in a Lean glossary (i.e. JIT, Standardized Work, Policy Deployment, and Kanban).

Perhaps most useful is the inclusion of visual diagrams illustrating the terms and concepts in practice. This is especially helpful when trying to visualize items such as an Operator Balance Chart (OBC).

The Lean Enterprise Institute acknowledges that its definitions represent the most common interpretations of the terms and concepts. Given the relative juniority of the Lean movement and its penchant for modified adoption, some level of variation is to be expected. Still, for the organization looking to draw a line in the sand with baseline definitions, *Lean Lexicon* will be an invaluable tool.

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## DEADLY WASTES

- WASTE FROM OVER-PRODUCTION
- WASTE OF WAITING TIME
- TRANSPORTATION WASTE
- PROCESSING WASTE
- INVENTORY WASTE
- WASTE OF MOTION
- WASTE FROM PRODUCT DEFECT

# CHASE PERFECTION, NOT LOWER WAGES

by Linford E. Stiles

We are all aware of the constant pressure to reduce production costs. I'm also aware that this same pressure is now spilling over into "white collar" functions as well. However, the belief that exporting these jobs is the answer to reducing costs is tragically shortsighted and likely holds long-term disruption for the American economy.

Outsourcing is nothing new. Attractive offshore sites have run the gamut from Ireland, to Mexico, Korea, Thailand, Japan, and now China. The pursuit of lower wages has always fueled the drive. Today's China craze is about wages as well but worsened by a relaxation of taxes on in-country participants. If memory serves, similar incentives were provided in previous objects of affection.

It is interesting, and instructive, to note that while the courtship period lasts varying amounts of time, it always ends with the need to find a new, even lower-cost opportunity just over the next hill. It is difficult to understand why we don't realize that once formerly underpaid workers see competition for their services increase, they quickly figure out how supply and demand works. This newfound wealth that results from their discovery just as quickly is spent on some of the luxury items they are producing for the rest of the world. First it's clothing, then appliances, then television, and finally cars and homes. It is a totally predictable progression and one that is being played out in all of those countries that caught the fancy of the cost-cutters in the United States and elsewhere. It is only a matter of time before Chinese citizens will want to participate in the global consumer economy and then the game is over. Even more disturbing is that when this happens, there will be a lot of brick-and-mortar or contractual obligations left over to deal with.

More frustrating is that there are ample examples of companies that have successfully overcome their paralysis and dealt with their processes, people, and markets. Toyota Motor Manufacturing, probably the most successful car company in the world by any measure, has come to the US built a plant, hired American workers, trained them, and in-sync with its sister plant in Ontario now produces automobiles at the lowest cost in the world – yes, including some home factories in Toyota City. It is also instructive to note that Toyota does not outsource. A spokesman for Toyota was recently said that the pride in the plant will not allow

**“THE ANSWER TO THIS EXODUS OF EARNING OPPORTUNITIES FOR AMERICAN WORKERS IS NOT TAKING JOBS AWAY, BUT RATHER FINDING WAYS TO INNOVATE AROUND THE COST PROBLEMS WE FACE.”**

anyone else to do it better. Why send orders to companies that are not as Lean as Toyota and expect them to provide better service, higher quality, and lower cost? It is not even discussed.

There are plenty of companies here in the US that have that have won the same battles. Jacobs Manufacturing (diesel engine brakes) was on the ropes in 1990 as Japanese imports threatened their very existence. Today a Lean "Jake Brake" serves Japanese customers with plants in Asia.

The Wiremold Company doubled its market share, reduced inventories by 75%, doubled margins, and tripled revenues using Lean techniques in all aspects of their business. Most notable about this turn-around was that Wiremold adopted Lean principals across the entire organization, including Accounting, Sales, Engineering, and Customer Service as well as Manufacturing. When the company was recently sold to a large European organization, all employees received substantial payments reflecting the value of their contribution to the process.

Pella Windows has overpowered its market using Lean principles to develop lightning speed customization for clients. Cellularization of manufacturing processes and continuous improvement across the entire organization have placed it in a virtually unassailable leadership position.

The answer to this exodus of earning opportunities for American workers is not taking jobs away, but rather finding ways to innovate around the cost problems we face. That is our expertise. We take the Toyota Production System, Americanize it, and beat them at their own game (a real reversal of fortunes). We use our proximity to our markets to outwit, out-design, and outplay our competition.

I agree with some that we may be standing on the threshold of a disturbing "race to the bottom." That we have come to this problem is not the fault of anyone, it is the fault of everyone. Escaping it is the opportunity we all can participate in. **a**

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# LEAN EVENTS:

## LEAN ENTERPRISE INSTITUTE TRAINING

April 13 – 15, 2004, Boston, MA

LEI's workshops strive to teach actual Lean applications, not just concepts. The Technical Workshops focus on how to apply proven Lean tools while the Value-Stream Management Seminars concentrate on how to plan, manage and prioritize Lean activities. For more information call 617.713.2900.

## THE QUEST FOR THE PERFECT ENGINE

April 13 – 14, 2004, Minneapolis, MN

This two-day event is based on the breakthrough book *The Perfect Engine* and designed to offer senior-level executives an overview of Lean and Six Sigma processes. The course is conducted by author and TBM CEO/Co-Founder Anand Sharma. For more information call TBM at 800.438.5535.

## SIMPLER 1-DAY WORKSHOP

April 19 – 23, Seattle, WA

This one-day workshop hosted by Simpler consulting group offers attendees crucial fundamentals for Lean implementation. Specifically, the workshop will focus on organizing for Lean, managing flow, Lean in administration and value stream mapping. For more information call 888.LEAN.888.

## PRODUCTIVITY INC.'S TPM CONFERENCE

May 10 – 13, 2004 New Orleans, LA

Designed to accelerate your Lean results, this conference will cover the fundamentals of Total Productive Maintenance and offer detailed insights through workshops, presentations, case studies and panel discussions. Presenting organizations include: Alcoa, Exxon Mobile, ThermoSpas, Inc., and National Semiconductor. For more information call 800.966.5423.

## LEADERSHIP IN MANUFACTURING: HOW THE BEST PLANTS DO IT

May 18 – May 20, 2004 Cleveland, OH

Attendees of this special AME conference will select one of five world-class facilities to tour. In addition, there will be presentations on other benchmark facilities and keynote speakers from The Timken Company and *Industry Week*. For more information call AME at 847.520.3282, ext. 226

## LEAN SERVICE SUMMIT

June 23 – 24, Amsterdam, Netherlands

First there was the Lean Summit, now comes the Lean Service Summit. This event will showcase Lean management in practice while bringing together experienced Lean experts from around the globe. Attendees will learn about the benefits Lean holds for the entire organization and will see examples taken from industries including finance, insurance and banking among others. Presenting organizations will include Jefferson Pilot Financial, Deutsche Telecom, Fujitsu Services and more. For more information contact the Lean Enterprise Academy in The UK.44.0.1989.764440.