



# Neovista News

News and Notes on Business Process Improvement:  
Lean Thinking, Six Sigma, Leadership, Culture Change

Neovista Consulting, LLC

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## Neovista Supports The New National Lean Certification

Over the past eight months Neovista Consulting has been actively engaged in the development of a nationally recognized standard for lean practitioners. The new Lean Certification is jointly sponsored by three organizations dedicated to world class manufacturing performance: the Society of Mechanical Engineers, the Association for Manufacturing Excellence, and the Shingo Prize for Manufacturing Excellence.

Work on the Lean Certification began in July 2005. Jeff Fuchs, president of Neovista Consulting joined 47 other experienced lean practitioners at SME Headquarters in Dearborn, Michigan for an intensive four-day development workshop. Among the participants were lean champions from Ford, GM, Toyota, Boeing, Orbital Sciences, dj Orthopedics, Textron, AutoZone, Verizon, Corning, Steelcase, the United States Air Force, and the Lean Enterprise Institute. At the conclusion of the event, the basic certification framework had been agreed upon, certifica-



tion levels defined, a draft body of knowledge established, and the first batch of test questions written and evaluated. Work continued intensively through 2005, with developers working independently, in conference calls, and virtual development sessions online. Neovista recently continued work at a January development session in Dayton, Ohio.

The certification was officially announced and launched in October at AME's national conference in Boston. Jeff Fuchs is one of about two dozen "test drivers" putting the standard through beta test. The first round of actual certification candidates will begin taking their exams and entering the process at SME's

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## Small Manufacturers' Importance / Issues Explained

A new report released by the National Association of Manufacturers (NAM) underscores how small and mid-sized manufacturers (SMMs) are playing an increasingly important role in the nation's industrial economy.

"Even though we've experienced some attrition of small manufacturers in the last five years, small and mid-sized companies still represent more than 99% of America's manufacturers, account for 40% of the value of U.S. production and are increasingly critical to our country's economic success," said NAM President John Engler. "But small

manufacturers are facing unprecedented challenges such as exorbitant energy and health care costs. The cost burden of complying with regulations falls disproportionately on small businesses in all sectors of the economy, but it is especially onerous for small manufacturers because regulatory costs for manufacturers are 81% higher than for all types of businesses. We simply must bring down these costs if we want to strengthen the hand of SMMs and enhance America's manufacturing economy," Engler said.

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## Neovista Supports New National Lean Certification

*Lean Certification is a necessary tool for the growing profession of business improvement using Lean Thinking. Certification helps to clearly validate the knowledge and skill of all lean practitioners.*

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upcoming conference in Los Angeles March 27-30.

To some, certification must seem like nothing more than a bureaucratic hurdle. Why is certification important? The answer lies in the fact that the field of Lean Thinking has grown immensely, especially following the publication of books such as *The Machine That Changed the World*, and *Lean Thinking*. Lean practitioners have sprouted up by the thousands, some with very substantial backgrounds and an understanding of lean that is both deep and broad. Unfortunately, the success and popularity of lean has also led to self-appointed “gurus” whose true understanding and experience with lean tools and principles leaves much to be desired. In recent years, a growing number of companies have been looking for a standard. When a consultant or new hire candidate comes to your company and claims to “know lean”, what tool do you have for discriminating between the poser and the professional? Certi-

fication is that tool. A lean certification is beneficial for the individual, as well. It demonstrates an accepted level of mastery that is widely recognized and portable. Certification works for everyone.

Why is Neovista Consulting so deeply involved in this enormous project? Since our beginning, Neovista has been dedicated to our clients’ success. The satisfaction in our business is derived from seeing and being a part of others’ success. Lean “hacks” do not enhance the field – they often do significant and irreparable harm to an organization’s change efforts. Six Sigma has its system of Green Belts and Black Belts. Engineering has the Professional Engineer’s certification. With the support of the SME, AME, and Shingo Prize, and with the endorsement of the Lean Enterprise Institute, organizations and individuals will have a tool for identifying and validating the professional competence of lean practitioners.

The Lean Certification is broken down into three levels. The Bronze Level qualifies practitioners at the tactical level – kaizens and fundamental lean tools. The Silver Level is designed for the practitioner that operates at the integrative or systems level. These are people who have applied themselves across value streams or large functions of the organization. The highest level of certification is the Gold, or strategic level. Gold practitioners have experience applying lean at the enterprise level.

The certification requirements are stringent. Candidates must have a specified amount of education in the field of lean, and a certain number of years in an applicable industry. They must submit a portfolio of their work in the field of lean. Their portfolio includes es-

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Kick-off of the Lean Certification Development Workshop at SME Headquarters in Dearborn, Michigan. Forty-eight Lean Experts from across the nation participated in the intensive four-day workshop.



## Neovista Supports New National Lean Certification

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says that describe their experience in eight key dimensions. They must pass a level-specific multiple choice exam, and, for the upper two levels, candidates must pass a panel interview. Perhaps one of the most unique features of the certification is that candidates for Silver or Gold certification must demonstrate that they have mentored a student in order to develop and grow the professional field of Lean Thinking.

Neovista Consulting is proud of its active and intensive support of the SME/AME/Shingo Prize Lean Certification. We strongly encourage clients and colleagues to explore how Lean Certification can support their professional development and organizational needs.

Additional information about the Lean Certification is available on our website [www.NeovistaConsulting.com](http://www.NeovistaConsulting.com):

- A full-color brochure has been published by the Society of Manufacturing Engineers. In it, Neovista offers our perspective about certification to potential applicants.
- Jeff Fuchs of Neovista Consulting was recently quoted in SME News. A pdf version of the article is available for download.
- Neovista offers workshops that qualify as Lean academic training needed to achieve certification. See the full list of our training workshops.
- After the full release of the certification standard, Neovista will offer multi-day preparation workshops.

The official Lean Certification website is maintained by the Society of Manufacturing Engineers at [www.sme.org](http://www.sme.org). From the menu bar, select "Professional Development" and "Certification". Click on the link to Lean Certification.



One of the working groups develops the mentoring component of the certification standard for the Lean Certification pilot. Other groups worked on portfolio standards, while others wrote or screened test questions.

## CAM Software Improves Run Times

"A quantum leap in CAM software," is how one user describes TrueMill.

TrueMill is a feature included in the newest release of Surfware's SURFCAM Velocity CAD/CAM software. The secret of TrueMill technology lies in the software programming that controls tool engagement during the milling process. TrueMill tool paths are free from loading spikes or sudden changes in tool loads. Regular programs are designed around a maximum load, meaning that most of the time the machine is cutting at less than full capability.

"TrueMill tool paths can be driven faster and deeper than traditional tool paths, resulting in dramatically reduced cycle times, while extending cutting tool life," says Glenn Coleman, vice president of product design at Surfware, Inc.

RPM-PSI of Northridge, California used TrueMill to machine an unmanned aerial vehicle component. The result: a reduction in machine cycle time from 44 minutes, 43 seconds using a conventional tool path to 27 minutes, 55 seconds. That is a 38% reduction. On a standard production run of 75 pieces, that would save 21 hours of machine run time.



Note the corners in the conventional tool path (above) and the smoother TrueMill tool path (below).





## Change or Die. What Would You Do?

What if you were given a choice? Change or die. What if a well-informed, trusted authority said you had to make difficult and enduring changes in the way you think and act? If you didn't, you die. Could you change?

If you said "yes," odds are that you are deluding yourself. You wouldn't change. The odds are nine to one against you.

Dr. Edward Miller, dean of the Johns Hopkins University medical school studied the 600,000 Americans who have bypasses each year. "If you look at people after coronary-artery bypass grafting two years later, 90% of them have not changed their lifestyle," Miller said. This after being told they could die.

John Kotter, author of *Leading Change* understands this. Business change, he says, is

all about "changing the behavior of people." His tips for helping create change:

- Frame change not around facts or fear, but around what people want.
- Radical changes are easier than small, incremental ones because we see big, immediate results.
- Make sure that systems and leader behaviors are aligned to support change.
- Understand that the weight of prior experience makes our brains hardwired against change.

Read the full FastCompany article at: [http://www.fastcompany.com/magazine/94/open\\_change-or-die.html](http://www.fastcompany.com/magazine/94/open_change-or-die.html)

*"To stay in business, [small manufacturers] have been entrepreneurs offering value to their customers that low-cost overseas competitors cannot match."*

## Small Manufacturers' Importance/Issues Explained

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In the report, Manufacturing Institute President Jerry Jasinowski points to two trends strongly influencing small manufacturers. "First, large manufacturers are increasing



their dependence on suppliers of components as they streamline their operations to increase productivity. This has been a positive growth story for many SMMs as they have innovatively expanded businesses into areas formerly owned and operated by large manufacturers. SMMs are the dominant part of the global supply-chain network of large corporations."

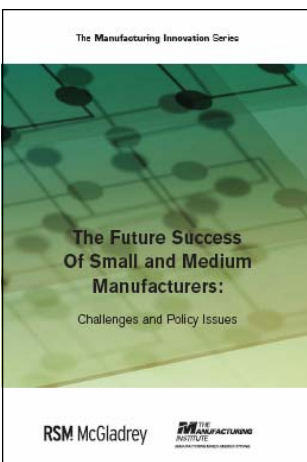
"The second trend - the development of increasingly competitive production in developing countries - cuts the other way and has toughened the landscape for all manufacturers, including SMMs," Jasinowski continued. "To stay in business, SMMs have been entrepreneurs offering value to their customers

that low-cost overseas competitors cannot match -- such as proprietary high-technology products, a willingness to customize, extraordinary service and parts support, flexible production runs and fast turnaround times.

These trends make it clear that the performance of all of U.S. manufacturing is tied more than ever to the success of SMMs."

"Small and mid-sized manufacturers benefit from an array of inherent competitive strengths. We are close to the customer base and exceptionally responsive, flexible and entrepreneurial. But we face enormous challenges that hamper our ability to win in the global marketplace," said Stephanie Harkness, Chairman and CEO of Pacific Plastics & Engineering in Soquel, California, and chair of the NAM Small & Medium Manufacturers.

A copy of the full small/medium manufacturing report is available online at [www.nam.org/SMMReport](http://www.nam.org/SMMReport).



**“Small Sigma”: Six Sigma for the Little Guy**

For large enterprises like Motorola and Raytheon, Six Sigma programs have delivered billions of dollars of savings. But for small companies, the expense of a full-blown Six Sigma has outweighed the likely benefit. The original program architects simply did not design it to “scale” well to small business.

In general terms, Six Sigma is a business improvement methodology that focuses on minimizing variation. The costs of variation to the average business are substantial. Consider that the average U.S. company operates at about four sigma, which is equal to 6,210 defects per million opportunities (DPMO). Six Sigma companies, by comparison, can maintain 3.4 DPMO. To put this into perspective, four sigma is equivalent to many U.S. airline baggage-handling operations. Six sigma is equivalent to the airline fatality rate. You and I are 1,800 times more likely to get to our destinations safely than our luggage.

The newest incarnation of Six Sigma, called Generation III, is designed with small companies in mind. The centerpieces of Gen III are online training and smaller and more affordable training options. Training a Six Sigma Black Belt for total mastery of all Six Sigma tools can cost a company tens of thousands of dollars, and high-quality training can take

the better part of a year. The high up-front investment and the long payback time make Black Belt training prohibitive for all but the largest organizations. Green Belt training – one step below a Black Belt – is often still out of reach for many firms. For Generation III, the White Belt was created. It requires far less training and the ROI is quicker. One benefit to the smaller subset of skills taught to White Belts is that it can be provided online for a fraction of the time and cost of Black Belt training.

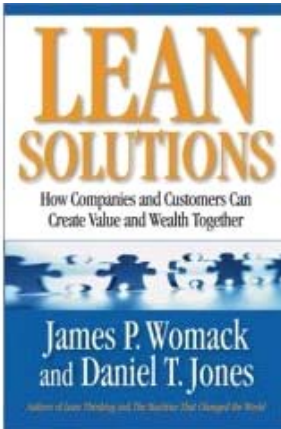
The White Belt naturally has a much narrower focus than the Black Belt, focusing perhaps only on a work cell, versus the Black Belt’s total organization focus. A White Belt practitioner could complete up to 12 projects each year with the potential of returning \$25k of savings from each project.

In the never-ending quest for global competitiveness, businesses must constantly seek out and apply appropriate and capable tools. The twin threats to every business are waste and variation. Until recently, systematic tools and methods for attacking process variation have been out of the reach of small- and medium-sized companies. Six Sigma Generation III puts a new tool in their toolbox.



*The newest version of Six Sigma, called Generation III, is designed with small companies in mind. Gen III brings the tools and techniques of Six Sigma within financial reach of small and medium size firms.*

Generation I Black Belt	Generation II Green Belt	Generation III White Belt
160 hours of training	80 hours of training	40 hours of training
Focus across multiple sites and divisions	Focus across a single site or division	Focus on a local area or process
Relies heavily on statistics and probability tools	Uses many Gen I tools, but with industry-specific focus	Less reliant on statistics, more reliant on equivalent graphical methods
Understands underlying theories and can adapt to many situations	Understands theories and can adapt to some unexpected situations	Understands how to apply tools to simple and localized situations
\$300k savings per Black Belt project	\$100k savings per Green Belt project	\$25k savings per White Belt project
4 projects per year	8 projects per year	12 projects per year
\$1.2M savings a year per Black Belt	\$800k savings a year per Green Belt	\$300k savings a year per White Belt



*As Lean Thinking has improved production efficiencies, why have we, as customers, felt increasingly dissatisfied?*

## Book Review: Lean Solutions by Womack and Jones

Lean Solutions is the fifth and latest book published by James Womack and Daniel Jones. Their previous works include *Lean Thinking* and *The Machine That Changed the World*.

As one would expect, this book builds upon the momentum of its predecessors. Lean, claim Womack and Jones, has gotten decent results in the business world, primarily in manufacturing. While some business processes have been significantly transformed by lean, the application has generally been selectively misapplied. This begins to explain why production efficiencies have steadily increased, but we, as consumers, feel increasingly dissatisfied.

Through a series of "consumption maps," Womack and Jones highlight the "hassle time" inherent in the ways we shop, travel, and receive essential services. Have you ever wondered why it is such a chore to get your car serviced? Why does the store stock thousands of items but is out of the one thing you really want? Self service kiosks at airline check in? Whose idea of customer focus is that? And customer support where you have to navigate a virtual yes/no maze only to be connected to a guy reading a script to you from Bangalore? Don't get me started!

The structure of Lean Solutions centers on six principles that the authors suggest we all as customers implicitly demand from our suppliers: "Solve my problem completely; don't waste my time; provide exactly what I want; deliver value where I want it; supply value when I want it; and reduce the number of decisions I must make to solve my problems."

The authors provide a thought-provoking mix of case studies and thought experiments to make their case for the non-lean irrationality of certain processes and they suggest ways in which lean principles can be applied to a range of business applications off the factory floor.

Lean Thinking typically begins as a factory improvement. Organizations that are successful with starting their lean transformation then migrate their application of lean to other associated processes and functions. With Lean Solutions, Womack and Jones attempt to pull organizations toward applying Lean Thinking to the front end of their businesses: the customer interface – the part of the business you and I as consumers care about the most.

## Jeff Liker to Keynote at Maryland Meeting

Jeff Liker is the scheduled keynote speaker at this year's annual meeting of the Maryland World Class Manufacturing Consortium (MWCMC). The event will be held on Thursday, April 20th at a location to be determined in the Baltimore area.

Liker is the author of numerous books on the topic of Lean Thinking. His most recent book, *The Toyota Way*, details the elements of the Toyota Production System, which Liker experienced firsthand as an engineer working for Toyota in Japan. *The Toyota Way* details 14 management principles and the underlying cultural features that have allowed Toyota to succeed so remarkably in the automotive industry. As many industry experts have noted, Toyota's consistently superior business performance is the result of its business philosophy and culture; *The Toyota Way* drives

Toyota's success.

Dr. Liker is currently a Professor of Industrial and Operations Engineering at the University of Michigan and a prominent figure in lean. He works closely with the Lean Enterprise Institute and other notable organizations to foster the understanding and application of the Lean Thinking philosophy.

The MWCMC is a 501(3)c non-profit organization and a part of Maryland's Department of Business and Economic Development. Its 66 Maryland-based member companies are all striving for improved business performance using tools such as Lean Thinking. For more information on the annual meeting or the Maryland World Class Manufacturing Consortium, visit their website at [www.mwcmc.org](http://www.mwcmc.org).



Dr. Jeffrey Liker

## “I Quit.... You.”

One of the most frequently requested Harvard Business Review article reprints about leadership is from the September, 2000 edition. Its title is a provocative question: “Why Should Anyone Be Led By You?” Why, indeed.

The quality of business leadership is critically important to business results. Every year, BusinessWeek magazine publishes a list of this country’s most admired companies. Reading their profiles, a common thread emerges. Toyota, General Electric, Southwest – the most successful and most admired companies have a consistent formula for success. High-performance companies have highly-motivated employees who passionately invest themselves in the business. They do this because the organizational culture, systems, and environment acknowledge their contributions and reward their investment. All these factors are designed and controlled by the company’s leaders. One conclusion, therefore, is that leaders create results. A more insightful takeaway is that leaders create results *through people*.

The overwhelming majority of company mission statements include some bullet point about how “our people are our most valuable asset.” This, along with other “motherhood” statements like “provide the highest quality products and services our customers”, become espoused values that oftentimes do little else than cover up an otherwise empty spot on the lobby wall. We all have espoused values. Without action, they are unfilled promises. They are New Year’s resolutions. Our actions are the only things that distinguish hollow promises from principle-centered behaviors.

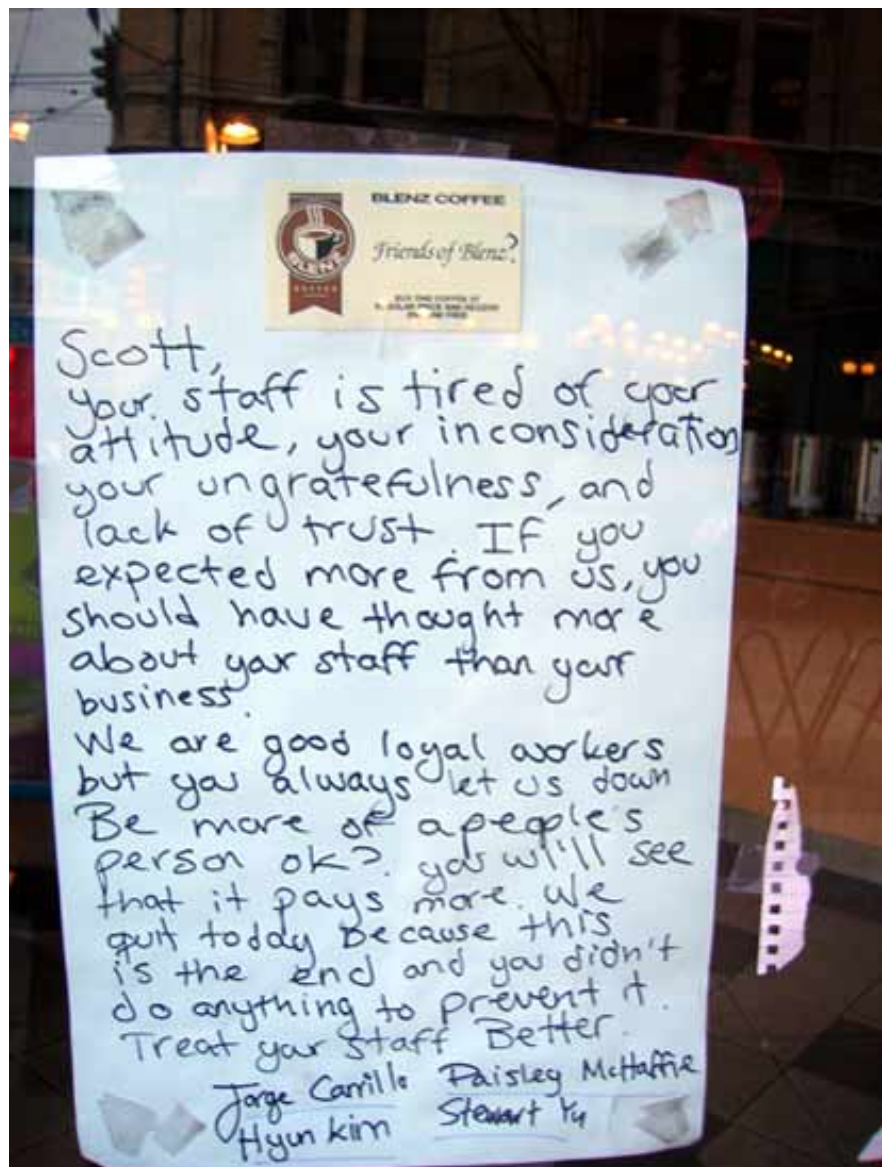
Are your people your most valuable asset? If so, what have you done to protect and nurture your most valuable asset? Do your actions as a leader reflect your espoused values? Or do your actions actually convey a different message about how much you appreciate your employees?

People want to know that their contributions are valued. It is a basic human need we all feel, right alongside security and sustenance. When their basic needs are not being met, people seek out a new environment that does. Leaders control the business environment. Employees understand this. More of-

ten that not, *people don’t quit their jobs, they quit their leaders.*

The businesses that survive and thrive are the ones that will delight their customers. Only your business performance will turn your customers into raving fans. But how are you trying to turn your customers into raving fans? Is your leadership creating a high-performance environment? What are you doing to turn your employees into raving fans?

*People want to know that their contributions are valued. More often than not, people don’t quit their jobs... they quit their leaders.*



In February 2006, this note was found taped to the front door of a Blenz coffee house in Vancouver, British Columbia. Four employees apparently had all they could take and quit their terrible job en masse. Or did they? Actually, it looks like they quit their terrible boss.

## Quotable Quotes:

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"There has never yet been a man in our history who led a life of ease whose name is worth remembering."

- Theodore Roosevelt

"Happiness does not come from doing easy work but from the afterglow of satisfaction that comes after the achievement of a difficult task that demanded our best."

- Theodore Rubin

"Luck is a dividend of sweat. The more you sweat, the luckier you get."

- Ray Kroc

"An idea not coupled with action will never get any bigger than the brain cell it occupied."

- Arnold Glasow

"Laughter and tears are both responses to frustration and exhaustion. I myself prefer to laugh, since there is less cleaning up to do afterward."

- Kurt Vonnegut

"He who rejects change is the architect of decay. The only human institution which rejects progress is the cemetery."

- Harold Wilson

Neovista News is a quarterly publication of Neovista Consulting, LLC and provides news and information for our clients, business improvement practitioners, and others interested in Lean Thinking, Six Sigma, Leadership, and Culture Change.

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For information on how Neovista Consulting can help you reach your business improvement goals, visit us on the web at [www.NeovistaConsulting.com](http://www.NeovistaConsulting.com).



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