

Process Excellence Advantage

A newsletter from ValuMetric® Services, Ortho-Clinical Diagnostics, Inc.

Vol. 3, No. 2 Fall 2007

INSIDE

Key Take-aways from the VAPEX Keynote Presentation

David Mann, author of *Creating a Lean Culture*, on Leading a Lean Organization p2

Q&A with David Mann

An exclusive follow-up interview with our keynote speaker p3

Lean in Healthcare:

A Cultural Transformation

VAPEX panelists from hospitals leading with Lean answer questions p8

Highlights from VAPEX

Workshops and Presentations

- Getting Out of the Blame Game p5
- Using Visual Controls to Ensure Continuous Improvement p6
- Managing Metrics the Lean Way p6
- Lean-Driven Laboratory Design p7
- Standard Work for Leadership & Managing to Standard Work p12
- The Change Integration Process p13

PEX Puzzler

p12

ValuMetric University Course Offerings

- Six Sigma Green Belt Certification
- Lean Training Series p14

Breakthrough Lean Executive Seminars

Philadelphia, Sept. 25–26, 2007
New York City, Jan. 17–18, 2008 p15



Process improvement leaders in healthcare convene in Chicago to share knowledge, best practices

“Embrace the miss,” proclaimed David Mann, the keynote speaker at ValuMetric VAPEX 2007. Speaking to the gathering of Process Excellence leaders in Chicago, the author of *Creating a Lean Culture* explained that every mistake is an opportunity to “smoke out” and eliminate flaws in a process. If staff members are reprimanded for their mistakes, they will hide them and deprive you of that information.

Mr. Mann’s address was part of a two-day conference that included workshops on the finer points of Lean, a panel discussion on applying Lean to a healthcare setting, and a

Lean-themed performance by a comedy improv troupe. “It was great to network with people who have already done things we’re planning to do,” said Pam Good, Director of Laboratory Services at BroMenn Regional Medical Center in Normal, Illinois. “Now we’re aware of both the problems we might encounter and some possible solutions.”

This special edition of PEX Advantage summarizes some key take-aways from the 3rd Annual VAPEX Forum. We also pose follow-up questions to our panel of hospital executives and present an exclusive follow-up interview with David Mann. ■



Key takeaways from David Mann's keynote address



What characterizes a Lean leader? Most organizations look for “results-oriented” managers who “solve problems and get things *done*.” But Lean is a system of ongoing *improvement*. Lean thinkers search out problems where none are thought to exist. Then they work to eliminate the causes. In a Lean manager’s view, negative feedback is the most valuable of all because it prompts adaptive change. That’s why Lean managers set up their systems to be very sensitive to problems.

“Lean management is difficult, not because it’s complex, but because it is different.”

A results-oriented executive will bellow, “Do you need me to help?” As soon as you start hitting the goal, you never see him anymore (which may be an additional incentive to meet the goal). As soon as you meet a goal set by a Lean manager, he brings other people around to see your process.

Lean management is difficult, not because it’s complex, but because it is different. You have to change your organization’s culture and habits. And those habits have had a long history of reinforcement. That’s why bad habits are not broken; they are methodically extinguished. In a process that is similar to extinguishing a campfire, you have to repeatedly douse, stir, and douse. It’s a cumulative process, completely reversible if you don’t persist.

Success measures should reflect the health of a process

Just as Lean leaders focus on process, your measures of success should reflect not results, but the health of your process. If you reach the point where you're achieving your goals 95% of the time, you want to stress the system and expose sources of failure. Otherwise, you'll never find ways to get better. "I know I'm not perfect," Mr. Mann explained. "And if I'm not perfect, I want to see my problems. Respect the problem and learn everything about it. Who were its parents and grandparents? Then pull it out by its roots."

The value of ... value stream mapping

Value stream mapping is an especially helpful tool for Lean leaders. Why? Because a process is often invisible. No one really owns it. No one has ever seen it. A value stream map gives you process measures (e.g., speed, quality, time, labor) that you can monitor to manage a process.

You can't sustain a Lean implementation from the office or from a computer screen. You need to "Go to the place, talk to the people, and look at the process."

And finally, the only teaching method that works well in Lean is the master/apprentice model. It's the philosophy of "Read one, see one, do one, teach one." You become a steward of the process perspective by becoming a student and then a teacher of it. ■

David Mann, PhD, is Manager of Lean Management and Organization at Steelcase, Inc. in Grand Rapids, Michigan. He is the author of Creating a Lean Culture.

A FOLLOW-UP INTERVIEW WITH VAPEX KEYNOTE SPEAKER DAVID MANN

The follow-up questions from VAPEX attendees led to an extended discussion with keynote speaker David Mann. The following is an account of this exclusive interview.

Q: You have said that processes are often overlooked in an organization because no one owns them. Why has the concept of process ownership not gotten traction?

A: I think the main reason is that we're not organized by process. Fundamentally, a process is horizontal. It goes across the organization and is contributed to by the functions through which it passes. There's no career path associated with a process. They're not on the org. chart. They're not in the budget.

Q: Should we consider appointing process managers?

A: We are experimenting with process management at Steelcase. There haven't been any formal announcements and everybody still has their day job.

But we're proceeding with the same strategy you would use in spreading Lean across an organization. You implement it in a place or two and get it working. You measure the difference before and after in terms that are important to the organization like capacity, throughput, cost, and quality of output. Then you show it to other people, and say, "Here's an area that everyone knows was tremendously frustrating before. Now it seems to be running pretty smoothly. Do you think there are other areas where we might want to try this kind of thing?"

So rather than appoint process managers and risk "nuclear" turf battles, we're going to demonstrate in a low-key way that this is a way of organizing and managing that makes sense. We want to get some practice at it and refine what we're doing as we bring people around.

Q: Sounds like a fairly low-key approach to change management.

A: Yes. My thinking in general is, it's not the new CEO who comes in and says, "I have a mandate to change everything, so here's what we're going to do." That's not necessarily going to be effective because it's by fiat and it goes against what people know and the skills people have and the way the organization is wired together.

The strategy we're talking about is more of a pull strategy. We establish a working model or two. We learn from those early experiments, make some refinements, and get the models working better and better. Then we start saying, "Hey, look what we've done over here. What do you think about this?" And give people a chance to draw their own conclusions.

Continued next page

“It’s senior sponsorship and frequent engagement that people remember. ‘My senior VP and corporate officer were down the other day looking at how this is going.’ That makes all the difference in the world.”

Q: If Lean doesn’t work well when “dictated” from above, does that mean it’s not as necessary to have the backing of senior management?

A: You always need the backing of senior management. I suppose there’s a chance that you can pull off some spectacular success, get the attention of those higher in the organization, and win them over that way. But that’s the exception.

In the majority of cases, there are political considerations when you’re crossing so many organizational boundaries. These are legitimate concerns around, “Do you want me to meet my functional goals, or do you want me to meet my process goals?” If the process goals didn’t come from someone in a position of authority, then managers aren’t going to be so interested in doing both.

People are capable of keeping two sets of goals in mind, but they just have to know that this new set of goals is also important—the one that isn’t reflected in the organization chart, the budgeting process, and all the rest. And it’s the senior sponsorship and frequent engagement that people remember. “Oh, yes, my senior vice president and corporate officer were down the other day looking at how this is going.” That makes all the difference in the world.

Q: Could you comment on the need to align incentives and compensation to process performance?

A: My first impulse is that it not be that structured. It should be covered under the normal compensation structures that reward success. As long as the senior executive level of an organization is involved in the decision of, “Yes, we should do this,” upper middle-level managers should know that if they do well, it’s going to be good for them. And if they don’t do well, it’s not going to be so good for them. The expectation is that they’re going to do what they need to do to make these process experiments successful.

Q: Would you advocate working with HR to include Lean competencies in the job descriptions?

A: It’s a very low-leverage place to begin. Usually, when something gets to the point of being in the job description, the organization is pretty settled on “This is the way we need to be doing these things.” But for most of us, Lean is in the early adoption stages. And we’ve already discussed how imposing Lean by fiat rarely works.

I would rather see the commitment arise and show itself first in the day-to-day management practices and then be captured in writing. A job description in an HR file is not really what drives an employee’s behavior.

Q: You wouldn’t add Lean management practices to a manager’s job description?

A: The managers in our newly Lean areas have standard work that pretty explicitly codifies what they’re supposed to do. They should be “going to the place, looking at the process, talking to the people.” They should be maintaining a system that captures misses from processes and converts them into actions that produce process improvement.

But these are tactical steps for how you get your job done. That kind of detail doesn’t really belong in a job description. Part of that may be a matter of taste. In my view, job descriptions and that sort of personnel/administrative functions don’t add much value; they’re necessary waste.

Q: Could you comment on the importance of identifying the policies that drive process structures and designs?

A: I can give you some examples that an organization might want to think about. The first is, you decide it’s important to cross-train your people and have them rotate through different workstations. Your HR policies need to reflect the expectation for cross training and rotation.

Another second policy might involve people whose jobs are eliminated as a result of a Lean initiative. Is the policy, “You have 90 days to find a new job, and if you don’t find one, you’re out of the organization?”

Or are the policies revised to say, “If you’re displaced because of process improvement, we will give you opportunities for training or place you in areas where we anticipate growth.” You need a policy like that because if you don’t guarantee people’s jobs, you’re not going to get a lot of cooperation from them in identifying changes that could be made.

Finally, when you do eliminate positions, which ones do you eliminate? Do you want to develop a pool of multiskilled people who can operate as backups or fill-ins for absent employees? If so, you may choose to eliminate the most skillful people because they would have the most value in this sort of multi-talented backup pool. These are policy-level things that warrant advance consideration.

Q: We’ve heard the person you want on the Lean team is the one you think your operation could never live without. Ironically, that’s the person you should pull to put on the team.

A: That is true because what you want to do with Lean is make the operation much more process-dependent and not so dependent on that smart guy or gal who happens to know everything. Because nothing is documented and there are no standard procedures, you call them to say, “Hey the thing’s hiccuping. What do we do now?” In a Lean environment, you’ll say, “Hey, the thing’s hiccuping. Let’s look up the hiccup procedure and follow the steps.”



Getting Out of the Blame Game

“Blaming others for our problems provides easy answers and seemingly ‘neat and tidy’ solutions,” explained Senior Consultant Mark Graban in a VAPEX breakout session. “We’ll just get rid of Joe and the problem won’t happen again.” But most errors are not solely an individual’s fault. We need to focus on systemic causes and systemic prevention.

To dramatize his point, Mr. Graban led the group in Deming’s Red Bead Game. “Employees” scooped samples from a premixed bin of beads, while “supervisors” recorded the ratio of desired white beads to undesired red beads. None of the typical measures – be it firing poor performers, a stern visit from “company headquarters,” or motivational posters – seemed effective at raising quality levels.

Mr. Graban then took the group through an alternative Lean approach. Instead of demanding “Who caused the problem,” ask, “Why did it happen? What allowed it to occur? And how can it be prevented?”

One helpful technique is to ask Toyota’s “Five Whys.” In one case study, when Lean team members asked, “Why are med cart batteries often dead?” the immediate answer was, “The battery charger isn’t working.”

Attendees simulate the “effectiveness” of typical quality control measures in Deming’s Red Bead Game.

But when they continued to ask, “Why isn’t the battery charger working,” it turned out that the outlet was dead. Asking additional “whys” eventually led to the root problem: High water pressure in a nearby sink caused splashing that short-circuited the electrical outlet.



Mistake-proofing in action: holes in this interoffice envelope help prevent office workers from accidentally discarding documents.

Mr. Graban then showed examples of mistake-proofing strategies that:

- Make it harder to *create* the error
- Make it possible to *reverse* the error
- Make it obvious that an *error has occurred*
- Detect *deviations* from procedures or fixed values

In short, make it easy for people to do the right thing – and hard for them to do the wrong thing. ■

“If each ‘miss’ is an opportunity for improvement, how can you tell when you’ve missed?”

Using Visual Controls to Ensure Continuous Improvement

If each “miss” is an opportunity for improvement, how can you tell when you’ve missed? That’s when you need visual controls to alert you at a glance when your process is not where it should be.

It could be a light that flashes when equipment is malfunctioning, or a red flag that pops up when your backlog exceeds a pre-set limit. The actual form will vary with the demands of your particular process, as David Mann explained in a VAPEX session on continuous improvement.

Time	Job	Status	Reason
8:00 AM	1000-001	On Schedule	
8:15 AM	1000-002	Behind	Machine Breakdown
8:30 AM	1000-003	On Schedule	
8:45 AM	1000-004	Behind	Material Delay
9:00 AM	1000-005	On Schedule	
9:15 AM	1000-006	Behind	Operator Error
9:30 AM	1000-007	On Schedule	
9:45 AM	1000-008	Behind	Quality Check
10:00 AM	1000-009	On Schedule	
10:15 AM	1000-010	Behind	Changeover
10:30 AM	1000-011	On Schedule	
10:45 AM	1000-012	Behind	Setup Error
11:00 AM	1000-013	On Schedule	
11:15 AM	1000-014	Behind	Inspection
11:30 AM	1000-015	On Schedule	
11:45 AM	1000-016	Behind	Communication
12:00 PM	1000-017	On Schedule	
12:15 PM	1000-018	Behind	Tooling
12:30 PM	1000-019	On Schedule	
12:45 PM	1000-020	Behind	Material
1:00 PM	1000-021	On Schedule	
1:15 PM	1000-022	Behind	Operator
1:30 PM	1000-023	On Schedule	
1:45 PM	1000-024	Behind	Quality
2:00 PM	1000-025	On Schedule	
2:15 PM	1000-026	Behind	Changeover
2:30 PM	1000-027	On Schedule	
2:45 PM	1000-028	Behind	Setup
3:00 PM	1000-029	On Schedule	
3:15 PM	1000-030	Behind	Inspection
3:30 PM	1000-031	On Schedule	
3:45 PM	1000-032	Behind	Communication
4:00 PM	1000-033	On Schedule	
4:15 PM	1000-034	Behind	Tooling
4:30 PM	1000-035	On Schedule	
4:45 PM	1000-036	Behind	Material
5:00 PM	1000-037	On Schedule	
5:15 PM	1000-038	Behind	Operator
5:30 PM	1000-039	On Schedule	
5:45 PM	1000-040	Behind	Quality
6:00 PM	1000-041	On Schedule	
6:15 PM	1000-042	Behind	Changeover
6:30 PM	1000-043	On Schedule	
6:45 PM	1000-044	Behind	Setup
7:00 PM	1000-045	On Schedule	
7:15 PM	1000-046	Behind	Inspection
7:30 PM	1000-047	On Schedule	
7:45 PM	1000-048	Behind	Communication
8:00 PM	1000-049	On Schedule	
8:15 PM	1000-050	Behind	Tooling
8:30 PM	1000-051	On Schedule	
8:45 PM	1000-052	Behind	Material
9:00 PM	1000-053	On Schedule	
9:15 PM	1000-054	Behind	Operator
9:30 PM	1000-055	On Schedule	
9:45 PM	1000-056	Behind	Quality
10:00 PM	1000-057	On Schedule	
10:15 PM	1000-058	Behind	Changeover
10:30 PM	1000-059	On Schedule	
10:45 PM	1000-060	Behind	Setup
11:00 PM	1000-061	On Schedule	
11:15 PM	1000-062	Behind	Inspection
11:30 PM	1000-063	On Schedule	
11:45 PM	1000-064	Behind	Communication
12:00 AM	1000-065	On Schedule	

Pink rectangles in this visual control show when production fell behind schedule. Workers record the reason in the column on the right.

But in general, an ideal visual control has the following characteristics:

1. It makes your process status obvious at a glance, e.g., from 10 feet away
2. You can explain how you’ll use the data
3. You can tell if the visual is current, communicating the most recent information
4. It is self-documented, telling you the “who, what, when, and how” of your process
5. Entries are clear, complete, specific
6. It is completed by hand, without requiring computer access
7. It is recorded on paper so it can be preserved for analysis

After showing examples of visual controls, Mr. Mann led an exercise on developing controls based on real-life scenarios provided by attendees. ■



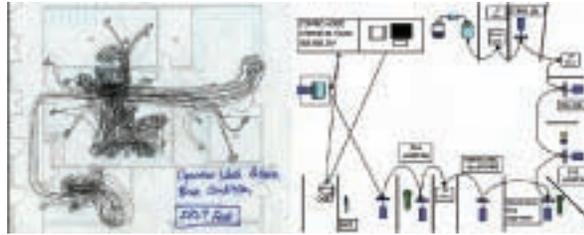
Managing Metrics the Lean Way

Your average turnaround time is 165 minutes today. It was 168 minutes three months ago. Is your process improvement initiative succeeding? “Two data points do not make a trend,” warned Senior Consultant Mark Graban in a preconference workshop at ValuMetrix APEx. To know if your changes are making a difference, you must first:

- Achieve a stable system, one that does not vary excessively on its own
- Calculate the remaining degree of variation so that you can distinguish genuine changes from mere “background noise” variation



Lean-Driven Laboratory Design



Room for improvement: Some of the most dramatic productivity gains can be achieved by placing the frequently needed equipment together.

A Lean operation makes the right products, in the right way, at the right time, at a cost that leaves a profit for the organization. In many cases, however, the very layout of a laboratory makes that difficult.

In her preconference workshop on Lean laboratory design, Six Sigma Black Belt and Lean Champion Claudia French explained the DMAI²C process for addressing that problem:

1. **DEFINE** the project and what is critical to quality for your customer
2. **MEASURE** the current state, including activity of the product and operator
3. **ANALYZE** product flow and operator activity to identify waste and opportunities for improvement

4. **INNOVATE AND IMPROVE**, basing a final layout on information gathered during analysis

5. **CONTROL** the outcome by establishing metrics that will measure the success of your project. Monitor those metrics daily during implementation and at least weekly once implementation is complete

Ms. French gave an example of how these steps were applied at Sacred Heart Medical Center in Spokane, Washington. After laboratory services were consolidated from three buildings into one Lean space, the lab was able to reassign 5 FTEs, while reducing overtime from 200 hours to roughly 20 hours per pay period. No specimen has been lost internally since implementation. ■

Managers who skip these steps may end up taking action that makes a stable situation worse. They would be better off heeding W. Edwards Deming, the grandfather of process improvement, who advised that sometimes the best course of action is, “Don’t just do something. Stand there.”

Mr. Graban gave examples of control charts that help differentiate “signal” data from background noise. Dotted lines indicate the limits of natural deviation. A data point that exceeds those limits suggests that something unusual has happened.

That is the manager’s cue to ask, “Is this likely to happen again? Is it preventable?”

“The key is to identify exceptions and respond the same day, not at the end of the month, when everyone has forgotten the details,” Mr. Graban said. “By then, it’s too late to figure out what caused the exception.”



“We’ve been doing a lot of ‘Oh, it’s bad today. Hurry, let’s do something,’ when maybe it’s just that day’s variation,” said Elizabeth Collins, a Lab Manager at New Hanover Regional Medical Center in North Carolina. “The math is right there in the handouts Mark gave us. He included sample control charts. So I do believe we’ll be able to do that when we get back.” ■

Managing a Stable System: This control chart shows the normal range of variation in a process, making it immediately clear when a significant exception has occurred.

“Two data points do not make a trend.”

Panel Discussion Follow-up



Our esteemed panelists (l. to r.) Charlotte Taylor, David Schlappy, Peter O'Brien, Fred Slunecka, and Shawn Noseworthy. Moderator: Jamie Miles (standing, right)

With so many perspectives and experiences to share, there was simply not enough time to answer the many questions sparked by the VAPEX panel discussion. Below, as promised, are the panelists' follow-up responses. Our panelists were:

- Shawn Noseworthy
Administrative Director
Florida Hospital, Orlando, Florida
- Peter O'Brien, Vice President, Kingston
General Hospital, Kingston, Ontario
- David Schlappy, Vice President
Le Bonheur Children's Medical Center
Memphis, Tennessee
- Fred Slunecka, Regional President
Avera McKennan Hospital
Sioux Falls, South Dakota
- Charlotte Taylor
Assistant Vice President
MedStar Health, Washington, DC

QUESTIONS FOR CHARLOTTE TAYLOR

Q: What did your Lean consultant observe that led to the recommendation to remove your automated line?

A: Employees wasted a lot of time walking around the track every time they had an exception or breakdown. We also couldn't get the number of instruments that we needed on the track because it was prohibitively expensive to get them to interface. It also became apparent that we were sometimes running dual systems. When a STAT order came in, we would run around the track to get it on the instrument, rather than putting it on the track and letting the track do its job because people were no longer as comfortable with it as they had been in earlier years.

Q: How are you tracking turnaround time, real time, every two hours?

A: Every two hours, our LIS spits out reports for four of the top-volume tests in the work cell. We focus on CBC protimes, our basic metabolic profile, chemistry, and our heart profile. Those are tests that we know need to get out within a very specific period of time. It took our LIS team a little while to figure out how to get that report. They had to configure it.

Our supervisors take that report and post how many exceptions did not hit the turnaround time. If they have three samples that didn't hit the turnaround time within those two hours, they find out what's going on with the instrument and if there are any issues. In fact, they are now training the staff to get their own reports, post them, and write the reasons why the exceptions occurred.

Q: Is your understanding of Lean different than when you first started?

A: Oh, yes. If it wasn't different, I wouldn't have grown, the company wouldn't have grown, and we wouldn't have taken advantage of all of the different workshops that are available out there. It truly is a journey of growth. When you first start on this path, you think you're going to complete a project and that's going to be the end of it. And it's not. It becomes a way of life.

QUESTIONS FOR DAVID SCHLAPPY

Q: When making your commitment to no layoffs due to Lean, did you allow for changing shift or work hours? If yes, how did you address staff concerns that the changes don't fit their personal needs?

A: Honestly, that never came up as an issue. There are cases where we had to adjust the schedule to meet demand, but in our case we never encountered that as a problem, particularly in the lab, because everything we eliminated was overtime and PRN status.

Q: Did your FTE reductions turn into actual savings?

A: Oh, yes. When we reduced our staff by 5.5 FTEs, we figured out how much that would cost and rolled that into the lab's budget for the following year. We've required the savings to be budgeted in, so that they will be in real dollars.

Q: Your Lean project called for establishing a complete backup work cell. Can you expand on what you meant by this deliverable?

A: We had enough space savings from our Lean design project to create a second redundant cell that serves three purposes. One is, when our volume gets high enough, we just fire up the second cell. The second is, if any piece of equipment in the first work cell breaks down, everybody just switches over to the second core cell, and we have zero downtime. And the third use is to keep things moving during regular preventive maintenance. You don't have to shut down our process to get that done.

Once we implement this in our new building, we will run one work cell for a month and then move to the other one for a month so that they're both being tested and worked in.

Q: You talk about ROI for Lean projects, but what about turnaround time, patient satisfaction, and other measures that are hard to express in short-term dollars?

A: I emphasize financial return because we took a gamble on implementing Lean in our hospital. We had to have some way to show that we were at least going to break even.

That said, every one of these projects had other metrics as well. For example, when we did our laboratory project, we showed a reduction in turnaround times for most specimens of between 30% and 50%. And we did that during a period of increased volume, with fewer people.

In our OR project, we reduced the time it took to build a case cart from 12 minutes to six minutes, just by having our inventory managed better.

In some cases, I think we could have done a better job of gathering baseline measures. So going forward, on all the projects we roll out, we're going to have a very well-defined set of balanced measures in the beginning that says, "Here's the ROI we've got to achieve. Here are the turnaround targets we've got to achieve. Here are the error rates we're trying to reduce, and so on." These measurements are very important for demonstrating success and getting support for future projects.

Q: So is your advice to measure as many of these metrics as possible?

A: I wouldn't say as many as possible. I would say pick the few that make the biggest difference. You want to have process metrics, such as turnaround times and throughput. You might also have patient satisfaction and some clinical or safety metrics. And then you'll have the financial piece. And all those together give you a balanced set of measures to say, "This project was a success as defined in five or six different terms."

Continued next page



QUESTION FOR PETER O'BRIEN

Q: What productivity benchmarks do you use for your laboratory?

A: We use benchmarks established by the Canadian Institute for Health Information. They are based on workload units, where one unit of work equals one minute of work. The following numbers are for teaching hospitals across Canada.

	Kingston General (Pre-Lean)	Mean	Median
Lab cost per inpatient weighted case	\$178CD	\$180CD	\$172CD
Workload units per weighted case	157	136	136
Cost per unit	\$1.11CD	\$1.26CD	\$1.24CD

\$CD = Canadian dollars

QUESTION FOR SHAWN NOSEWORTHY

Q: Is there any ongoing Lean training for your people?

A: We have provided one-day training sessions. When a project begins, we assign people from that area to work with our full-time Lean Process Improvement Specialist on the videotaping, analysis, and piloting. We originally learned these techniques during the five-day training and original project with our ValuMetrix consultants.

QUESTIONS TO MULTIPLE PANELISTS

Q: Do you have FTE/financial savings targets per kaizen (single quick improvement) or one general target for an entire Lean project?



David Schlappy: We never really followed a kaizen approach. We had a target that we aimed to hit for the whole project. We'd say, "Our ROI should be this much over this many years, and it should take us this many months to get to break-even."



Fred Slunecka: We had a rule of thumb that we ought to save twice as much money as we put into a Lean project. And we've done that on most projects, but not all. We had one project in the Emergency Department where we actually added FTEs because that's what it would take to improve throughput. The savings in that case came through reduced construction costs. So the short answer is every project has saved more than the cost of the project, but not every project saves FTEs.

Q: Does "cost avoidance" translate into actual savings?

David Schlappy: That's real money there. We had been funded for a construction project and were trying to use Lean to get us back within budget. But the facility we planned would have had 3,600 square feet of space we didn't need. We'd be paying people to walk around between multiple collection points, interfering with lab operations by walking around and trying to find supplies. We would have had to hire at least three more FTEs to cover that wasteful layout.

We would have built the facility that way, so that's where the real savings come in. We saved 3,500 square feet at a cost of roughly \$250 per square foot. Interestingly, we just finished with a first-pass review of our ED, and it's astounding how much waste we had built into it. We see an opportunity for a 5,400 sq. ft. reduction. We're going to build a smaller, more efficient hospital at \$250 per square foot. The cost avoidance is real.



Shawn Noseworthy: The design of our expanded campus kitchen was 25% over budget. By the middle of the Lean project, however, we realized that a better Lean flow would reduce our need for expansion space and allow us to renovate existing space instead. I pulled the plug on the expanded kitchen design.

Changing our processes has also allowed us to forego a planned expansion of our Food Production Center's cook-chill facility. This represents a \$5 million capital cost avoidance.

Q: What type of change management strategy did you follow?



Charlotte Taylor: It takes a lot of communication. People don't always hear you in the same way. So you just have to keep at it in small increments. We try to spend a lot of time with the staff and speak about Lean. In some cases, the managers have changed their hours. They come in earlier in the morning to be there with the staff and start the day by setting the right tone.



We bought David Mann's book (*Creating a Lean Culture*) for every single team leader. And now several of our sites are doing a book club. Every week they read one chapter and try to adopt some of the things they've read in the book.

I also think that as laboratorians, we often fail to show upper management the good things that we're doing and the positive results that come out of these efforts. So we are now presenting more of our information to upper management.

David Schlappy: We decided what would need to be communicated to whom, how we would want to do that, and how we would mitigate fears and frustration. Then we did a lot of communication. We conduct training at all levels – everything from 30-minute discussions and staff meetings to a letter, a newsletter, and notes. We hold bigger celebrations where we bring people together and say, "Hey, this is what we did. Congratulations." We thank everybody and recognize the team.

There were also a few cases where we had to have one-on-one conversations with somebody who wasn't really seeing that this was going to require them to change their job. We wanted to make them aware that "Yes, we want to hear your suggestions and input. But this is the direction we're taking and we're not turning back." That was a message we had to convey consistently.

Q: Have you worked with human resources to incorporate Lean requirements into your job descriptions?



Peter O'Brien: Yes. We haven't changed all the job descriptions yet, but we have rewritten job descriptions for senior technologists and for charts technologists that outline their duties and what they need to do at the supervisory levels and beyond. And those descriptions include Lean duties.

Fred Slunecka: To some degree. The job descriptions in the laboratory have certainly changed. We're just now in the process of trying to create individual accountabilities as it relates to both service and processes. It's a work in progress.

Q: After investing and culturally transforming your staff into Lean leaders, how do you keep them from leaving the organization?

Fred Slunecka: We haven't had any problems with people leaving, partly because they're so excited about what we're doing. I think it's energized them to where they can't imagine working now in an organization that isn't using Lean principles.

David Schlappy: The biggest thing we can do is to create an environment where they feel successful and that they are making a difference – not just in the lives of our patients, but in our operation. We have not done any special work to retain them, other than create a good work environment, give them the tools they need, support them, and pay them a fair salary.

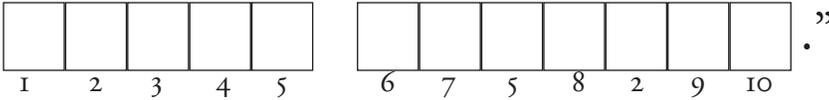
But on the other hand if you've built your process well, it shouldn't depend on your Lean leaders to keep running. They are there to assist in holding the gains, but also to identify and fix new things. So having a Lean team member leave might slow your program down, but the process itself should continue to run well.

Q: How has Lean changed you as a leader?

David Schlappy: Lean has given me a different perspective on how I manage. It encourages me to think more about processes. It has also allowed me to set up some specific operational controls that tie accountability to the things that make a difference. So definitely yes, Lean has expanded my skills as a leader.

Shawn Noseworthy: It has totally changed my thinking and understanding of what we can do with a process to improve our space, flow, quality, and output. Once I became sensitized to the waste in our processes, I felt compelled by my sense of stewardship to eliminate it wherever possible. ■

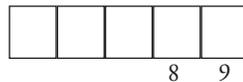
“Whenever there is fear,
you will get



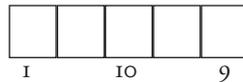
The above quote serves as a reminder that we must “embrace the miss.” Use the clues below to complete the puzzle.

—W. Edwards Deming

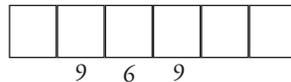
Activity that changes the fit, form, or function of a product adds ...



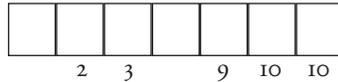
Activity that does NOT change the fit, form, or function of a product is ...



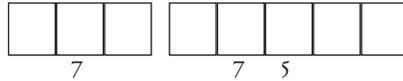
A flaw or a failure to meet an intended requirement is a ...



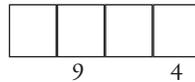
Instead of end results, a Lean manager focuses on the ...



This level of quality results in no more than 3.4 defects per million opportunities



A systematic methodology for eliminating waste



Fax or mail the solution (one per person, please) to receive a FREE copy of *The Lean Toolbox*, plus a \$50 certificate that can be applied to registration for a Lean seminar or Green Belt Training!

Name (please print)

Title

Company

Street Address

City/State/Zip

Telephone

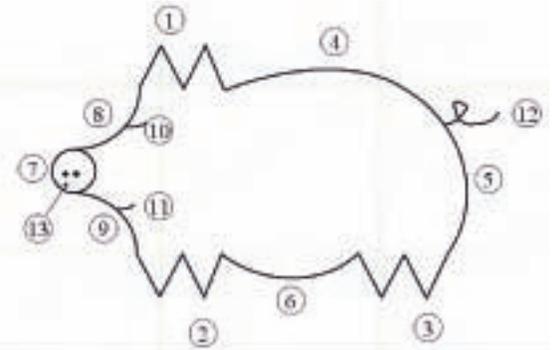
E-mail address

Mail your completed puzzle by September 15, 2007, to:
Audrey Knable
ValuMetrix Services, Ortho-Clinical Diagnostics
1001 Route 202, Raritan, NJ 08869

Or fax it to:
908-218-8024

KEY TAKE-AWAYS

Standard Work for Leadership & Managing to Standard Work



A standardized 13-step process led to faster, more consistent “pig production.”

“You have 40 seconds to draw a pig,” announced Senior Consultant Lewis Lefteroff.

The participants in his breakout session generated a wide variety of porkers. A few were unable to finish within the allotted time.

Mr. Lefteroff then taught the group “standard work” for drawing a pig, with such steps as “draw a letter M at the top-left intersection of the grid on the paper, then draw a W at the bottom-left intersection.” The results of the second attempt were much more uniform, and the number of timely completions rose dramatically.

Having demonstrated the value of standard work, Mr. Lefteroff explained the steps for developing it (yup, those are standardized, too). He introduced tools for communicating standard work to employees and monitoring their adherence. And he described specific steps leaders can take to make standard work part of an organization’s culture. Without discipline and standardization, any system will backslide. Leaders need to coach and continuously reinforce. ■

The Change Integration Process

“People don’t mind change, they just don’t like being changed,” said Training Specialist Michele Long in a special postconference workshop.

She explained how an organization’s members must be led up a “commitment curve,” which begins with initial contact with the proposed change through awareness, understanding, and ultimately internalization. Managing this process correctly can lead to a faster return on investment, reduced productivity losses, and lower project costs. A recommended five-step process calls for change managers to:

1. Develop a vision of the future that will be realized through the change
2. Communicate the future state and organize support for the change
3. Ensure success by establishing systems, structure, processes, and capabilities for change
4. Implement the changes, make course corrections, and continuously improve
5. Preserve the gains and improve the organization’s capacity to change

“Just because a stakeholder lets you finish your presentation doesn’t mean they’re on board with your project,” warned Ms. Long. She led the group in an exercise of identifying key stakeholders in their own organizations and determining what levers could be used to bring them on board. Some additional practical tips:

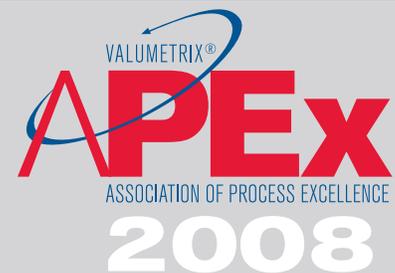
- You will always have nay-sayers. Seek early wins to help win them over. Then build on those early successes.
- Get people actively involved early on. People support what they helped create.
- Protect yourself from the person who sits silently through a presentation and challenges you later with, “I never said it was okay.” Clearly announce during the meeting that, “This is your one chance to disagree. There will be no ‘meeting after the meeting.’” ■



A communication plan is essential for making people ready, willing, and able to work in new ways.

SAVE THE DATE!

Mark your calendar for ValuMetrix APEX 2008 April 15–17, 2008 in Philadelphia



Joe Teddy, a Lean team member from Saint Michael’s Hospital, is one attendee who would be happy to come back. “I know that next year, ValuMetrix will have new ideas and approaches to show us, practices we haven’t thought of, or haven’t come across yet,” he says. “And we’ll be further along in our own projects and have more to share with other people.”



ValuMetrix University Successful Change Management October 9–10, 2007

For details and registration, visit ValuMetrixServices.com

ENROLL TODAY!

ValuMetrix University

More savings. Higher quality.

ValuMetrix University provides essential training programs in process improvement for healthcare organizations.

The more trained your people are at process improvement, the better they become at moving your organization forward.

ValuMetrix University, brought to you by Ortho-Clinical Diagnostics, has trained thousands of healthcare professionals in the advanced techniques of process improvement. Each course takes a pragmatic approach, teaching attendees to apply the skills and tools to real-life challenges at their workplace.

For details on courses, registration, and group discounts:

- Call: 800-523-6911, ext. 8316
- E-mail: VMU@ocdus.jnj.com
- Visit: ValuMetrixServices.com

Fall 2007 Course Offerings

SIX SIGMA GREEN BELT CERTIFICATION

Your organization gains a champion who can lead process improvement projects

Two 4½-day training sessions combined with an actual on-site project

Week 1:	Sept. 10–14
Week 2:	Oct. 29–Nov. 2

VALUMETRIX LEAN TRAINING SERIES

This two-week series methodically takes you from the basics to the finer points of Lean. Take individual courses – or enjoy a reduced rate on the entire series.

Lean Fundamentals	3 days	Oct. 2–4
Breakthrough Thinking	1 day	Oct. 5
Successful Change Management	2 days	Oct. 9–10
Managing in a Lean Environment	2 days	Oct. 11–12

Course Location:

Johnson & Johnson
Education and Conference Center
New Brunswick, New Jersey

Breakthrough Lean

And Two In-depth Workshops

**Better
patient care.**

“YOU’RE NOT READING ABOUT A PROJECT THAT SOMEONE ELSE DID. YOU’RE TAKING THE TOOLS AND APPLYING THEM IN YOUR OWN ENVIRONMENT. TO ME THAT’S MORE MEANINGFUL BECAUSE AS YOU’RE GOING THROUGH THAT PROCESS, YOU’RE THINKING, ‘I KNOW WHERE I COULD USE THIS,’ OR ‘I KNOW WHAT MY NEXT PROJECT IS GOING TO BE.’”

Carol Hill, MT (ASCP), CLS
Ed/Quality/Compliance Coordinator
Fairview Laboratory Services
Minneapolis, Minnesota

Why settle for incremental improvement?

Throughout the U.S. and Canada, healthcare organizations are using Lean to achieve breakthrough results.

- » Children’s hospital improves testing turnaround time by 27-56%, **realizes more than \$290,000 in savings.***
- » Hospital OR department cuts patient preparation time by 40%, **saves \$182,000 in inventory costs.***
- » Hospital Emergency Department shortens patient turnaround time by 29%, **saves \$0.25 million in avoided construction costs.***

You too can achieve dramatic, sustainable gains.

Join us for two intensive, information-packed days and see how!

September 25–26 Philadelphia, PA

FEATURING



Jane Crosby, RT, MBA
Laboratory Service Director
Providence Health Care
Vancouver, BC, Canada



Debra Rodahl
System Director
HealthEast Laboratory Services
St. Paul, Minnesota



Michael F. Powell, MS, FASHP
Executive Director
Pharmacy/Pathology Services
The Nebraska Medical Center
Omaha, Nebraska

Can’t attend this fall?

**Next Breakthrough Lean session:
January 17–18, 2008
New York City**

For complete details

Call: 800-523-6911, ext. 8316

Email: AKnable@ocdus.jnj.com

Visit: ValuMetrixServices.com

Process Excellence is the proven way to reduce error rates, cut costs, raise productivity, increase capacity, and improve customer satisfaction. It combines the tools and methodologies of:

- **Six Sigma** – measuring and reducing your error and defect rate.
- **Lean** – eliminating waste to speed your workflow and deliver better value.
- **Design Excellence** – structuring a process from the outset so that it flows efficiently with minimal opportunities for waste or error.

ValuMetrix Services, from Ortho-Clinical Diagnostics, helps you harness the power of Process Excellence. We provide hands-on assistance throughout your first effort, while giving you the tools and training to handle subsequent projects on your own.

Process Excellence:
the systematic approach to process
and quality improvement

Answer to puzzle on page 12:

W S I U S I J S U O I M

“Whenever there is fear,
you will get

ValuMetrix is a registered trademark of Ortho-Clinical Diagnostics. All other trademarks and service marks are the property of their respective owners.

Printed in USA.
©Ortho-Clinical Diagnostics, Inc. 2007 OC10107

- Yes, I would like you to call me to discuss how I can improve my laboratory’s performance.
- Yes, I would like to receive news and updates from ValuMetrix Services via e-mail, including valuable Process Excellence case histories. I understand I may unsubscribe anytime.

PLEASE PRINT

Name _____

Title _____

Company/Affiliation _____

Address _____

City _____ State _____ Zip _____

Phone Number _____ E-mail Address _____

Do you have colleagues who would benefit from receiving this newsletter?
We will be happy to add them to our mailing list:

Your Colleague’s Name _____

Your Colleague’s Department _____

Your Colleague’s Organization _____

Street Address _____

City _____ State _____ Zip _____

FAX THIS FORM TO: 908-218-8024