

BY MARISA PALMIERI

Lessons in LEAN

In a time of budget cuts and decreasing rounds, some golf course managers embrace the manufacturing world's concept of operating the "least waste way"

Golf course superintendents always have been a lean bunch. The job lends itself to operating as efficiently as possible considering its demands: achieving a specific level of conditioning with a fixed budget and a set of expenses that are going anywhere but down.

One example is a process improvement implemented at Northland Country Club in Duluth, Minn., that saved the maintenance department \$18,000 in each of the past two seasons. Superintendent Chris Tritabaugh changed the mowing pattern from diagonal stripes to a light/dark pattern. Based on man-hour and fuel savings, the cost to mow fairways for one season decreased from \$30,000 to \$12,000. Those savings have allowed Tritabaugh to reassign seasonal labor to other tasks that make a significant difference for members, such as walk-mowing and topdressing approaches and hand-raking bunkers.

Creating efficiencies is second nature for Tritabaugh and most superintendents. Lately, however, some golf course managers are taking their knack for improving productivity one step further – they're formally pursuing lean management in the mold of the Toyota Production System.

How is that different from what Tritabaugh or any superintendent does daily? Those who practice lean management say it's mainly a cultural difference. Lean requires a commitment to a culture that encourages improvement to come incrementally and continuously over time and from anywhere, including line-level employees and those outside the department. Lean is a mindset that permeates the entire organization, so everyone is always identifying and banishing wasteful practices.

LEAN PRINCIPLES

The term lean can be a misnomer, says Jim Paluch, president of JP Horizons, a green industry consulting firm that created a lean-based program called the Working Smarter Training Challenge. When people hear "lean" they think of cutting costs or doing more with less, Paluch says. With lean management, those aren't the goals.

"It's about increasing our capacity to serve," he says. "It's doing more with what

we have, not doing more with less.”

To achieve that, an organization needs to focus on operating the least waste way, by first understanding lean principles derived from the Toyota Production System, the basis of which is identifying waste and eradicating all nonvalue-adding steps in a process.

The Toyota model says processes only add value when they're producing goods or providing services customers will pay for. In these terms, golf course maintenance crews are only providing value when they're mowing, applying pesticides and performing other tasks that directly improve the quality of the playing surface. Standing around and on-course travel time are examples of wasteful activities.

To eliminate nonvalue-adding steps, lean organizations conduct kaizen events, which are five-step sessions for analyzing processes. (See “Understanding kaizen,” below.)

It's also important to understand that change doesn't come overnight, Paluch says, noting it can be difficult for results-oriented managers and superintendents to overcome this aspect of lean management.

“The toughest thing to learn is patience,” he says.

BIG SAVINGS

Lexington Country Club in Fort Myers, Fla., is one golf facility on a lean journey. In late 2006, chief operating officer Al Kinkle enrolled

the club in the 52-week-long WSTC, which he learned about when he was education chair of the Club Managers Association of America.

When Kinkle first heard about lean management, he believed his facility was already operating efficiently, but he signed up for the training program anyway. He says he thought the club would gain something from the weekly team meetings.

“Then the money started to come along, and of course we enjoyed that,” Kinkle says.

Any golf course manager would. After all departments at the club participated for one year, the Lexington staff presented the board with a check for more than \$800,000 to reflect the savings created during its lean transformation. Operating costs shrunk by about \$200,000, and another \$600,000 was deferred to other years.

Savings came from analyzing processes throughout all departments. In maintenance, for example, an analysis of an off-site storage area revealed disorganization, which was wasteful because it consumed more space than needed and took employees longer than necessary to locate stored items. After conducting a kaizen event, the club improved organization and reduced storage units from four to three, saving \$1,100 a year. (See “How they did it” on page 35 for more examples of how maintenance budgets benefit from lean.)

Additionally, departments are able to overlap in a way they never knew was possible. For exam-

Opposite page: From left, Al Kinkle, COO; Janice Beckett, human resources director; and Laurie Frutche, golf course superintendent, helped save Lexington Country Club \$800,000.

Understanding kaizen

At lean organizations, kaizen events – five-step sessions that focus on analyzing and changing a given process – are where most of the efficiency happens. Kaizen is typically thought of in terms of a specific event, but it doesn't have to be that way.

“Kaizen” is Japanese for slow, continuous improvement for the better,” says Jim Paluch, president of JP Horizons, a green industry consulting firm that created a lean management-based training program. “In fact, at Toyota, anybody at any time can suggest a change. You don't need a kaizen event to make a change.”

The five steps to a kaizen event are:

1. **Document current conditions.** Observe the process, map it out and measure or time it if necessary.
2. **Identify waste.** According to the Toyota Production System, there are seven types. They are (with golf course maintenance examples):

Transportation waste – the time crew members spend traveling out to the course

Inventory waste – sand for bunkers that's improperly stored and becomes mixed with debris, making it unusable

Motion waste – excessive bending or lifting (onto a trailer, for example) that takes place when disposing grass clippings or debris

Waiting waste – crew members standing around because they haven't been given proper instruction or trained to look for other tasks to do during downtime

Overprocessing waste – two people doing a one-man job, adding hours to the overall time it takes to complete the task

Overproduction waste – mowing an area of the course more times than necessary to achieve a result that meets golfers expectations

Waste caused by defects – quality issues or equipment breakdowns causing lost time or the need for meetings

3. **Make changes.** Roll up your sleeves and do something – create a new process – don't just talk about it.

4. **Set a new standard.** Write down the new process so it can be understood, followed and improved.

5. **Celebrate.** Take time to enjoy your accomplishments and recognize peoples' efforts. GCI

ple, golf course superintendent Laurie Frutche, who also oversees grounds maintenance around residential areas, didn't know that the homeowners' association department regularly sent an employee out to identify which homes' roofs needed to be pressure washed.

"I'm out there every day anyway," Frutche says. "I never knew that was part of the HOA department manager's job description, but now I know, and I can look for that while I'm out there."

Such realizations come naturally now.

"It's hard to explain, but it's just instilled in your mind that you're always going to be looking for things like that," Frutche says. "We can say to each other, 'Work smarter,' and it's just a mindset."

THINKING DIFFERENTLY

Former golf course superintendent Charlie Fultz, now a technical representative with Grigg Bros.,

also embraced lean management when he was at Shenvallee Golf Resort in New Market, Va., in 2007. But he, too, was skeptical when he signed up for the program.

"I thought I was already running a lean ship at that point," says Fultz, noting he didn't have much of a choice. He managed Shenvallee's 27 holes with nine crew members and a \$550,000 budget. "But we were able to attack some of our operations and daily routines and save man-hours. You figure out you can save a half hour here and there, and at the end of the week, that becomes eight hours, which is more than an hour a day. For a course with a crew and budget my size, we couldn't afford to throw away an hour a day."

All told, Fultz's maintenance department saved about \$10,000 in man-hours that year. Fultz was able to improve course conditions by dedicating the saved hours to the detail and touch-up work that typically goes by the way-

side at a facility with such a small maintenance budget.

"It began to change the way I thought about how an operation was run," Fultz says.

IN PROGRESS

Ozaukee Country Club in Mequon, Wis., is another facility pursuing lean management, also through the WSTC. Superintendent Colin Seaberg says the maintenance department hasn't seen any drastic changes yet, but he believes lean is a good concept.

"Has it been an epiphany? No," he says. "But it makes us talk about being lean and think about it all the time. But as far as changing drastically, it hasn't happened because we had always been efficient before."

At press time, Seaberg says his department hasn't yet completed a full year of the program or conducted any kaizen events. Once it does, Seaberg says he may begin to realize more quan-

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tifiable results in the program. But he foresees a challenge: His department will arrive at this point in the program in the off season, so recreating a maintenance process indoors to analyze it for a kaizen event won't reflect a real-world situation and may not yield optimum results.

"But I'm the kind of person that has to see concrete evidence of progress – that's why I'm in the business I'm in," he says. "We're going to do a kaizen event at some point, but we haven't decided on which process we'll look at yet."

Even if Seaberg doesn't see the monetary results his general manager, who asked him to participate in the program, is hoping for, he believes participating has been beneficial. Seaberg says the general manager hopes to recoup at least the program fee, which is \$3,750.

"Some of the best time I spend as a manager each week is when I have the time to talk to everyone on my team and those above me about what's going on around here," he says. "The

communications have been much better as far as what's going on clubwide."

GETTING THERE

Lean management isn't a new concept – it's prevalent in manufacturing, there have been volumes written about the topic and seminars on lean strategies abound – but the golf industry hasn't widely pursued lean in the formal sense. About 20 golf facilities have participated in the WSTC; *Golf Course Industry* editors couldn't identify any other facilities formally pursuing a lean management strategy based on Toyota principles.

Paluch says those who are interested in pursuing lean management shouldn't think of it as a buzzword or the management concept du jour.

"Lean isn't something you learn one time in a book or at a seminar," he says. "It's a transformation that begins with the people in an organization."


Kinkle agrees, emphasizing that the journey itself and the cultural changes that take place are more important than any immediate results.

Organizations may not realize long-term success if staff members haven't been trained properly in lean concepts, which emphasize identifying waste, continuous improvement and the role staff members play in the complete operation, Kinkle says.

For Lexington Country Club, the WSTC program was the key to seeing results.

"It gives us the structure we need to continue on," says Janice Beckett, Lexington's human resources director serving as the coordinator for the club's WSTC efforts.

The program requires participants to download weekly training modules. One employee serves as the presenter each week, learning the material and then presenting it to the rest of the team. It's supposed to take an hour or less per week.



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"There's always an excuse not to have a weekly meeting," Beckett says. "But this gives us the structure to continue on and be consistent."

The structure wasn't enough for another golf club in Florida. It wasn't able to maintain its participation in the WSTC program once the busy season began.

"For us, at an ultraprivate club in Florida, our season starts Nov. 1," says the director of golf course maintenance operations who asked that his and the club's name not be disclosed. "We do all our rounds November to April. It's really tough when you're preparing welcome back dinners and events, so the GM said let's let up on this program until the beginning of next summer."

The director of golf says there was some benefit to the short-lived participation in the program, which was never reinstated.

"We had large meetings with all the department heads and assistants – about 30 people in a room together for an hour and a half," he says, adding that those meetings were beneficial. "The maintenance department participated, but it was all common sense stuff we do anyway. I can see where in a clubhouse operation with more employees it might apply a little more than down in our area. We like to think we already do this stuff."

THE TIME IS NOW

Though committing to a lean management pro-

gram may not be for everyone, considering the state of the economy and the golf market, it can't hurt to consider pursuing any strategy that makes an operation more efficient, Kinkle says.

"Things aren't easy," he says. "We have to be quick on our feet and constantly think about how we can better serve our members, the service we provide and how we can keep our costs down."

In December, Lexington Country Club began a new phase involving more line-level staff into the lean process.

Additionally, the club's board has added a clause about continuing lean into Kinkle's review process.

"They're so happy with the results," he says. **GCI**

How they did it

After completing a 52-week lean training program, Shenvalee Golf Resort realized a \$10,000 man-hour savings. Lexington Country Club was able to cut or defer costs totaling more than \$800,000. Here are a few examples of how they did it:

Shenvalee Golf Resort, New Market, Va.

CORE AERIFICATION

Before: 76 man-hours.

After: 65 man-hours.

Savings: 11 man-hours.

How'd they do it? By dissecting the process and putting it back together during a kaizen event, former superintendent Charlie Fultz, now a technical representative with Grigg Bros., realized there was a lot of wasted time while one crew member waited for another to finish his task. The maintenance staff created a process in which one person began his job and the person behind him didn't catch up, so the process would always be progressing. One example was eliminating the step of pulling out flag sticks and cups the day before aerifying. Instead, the crew members aerifying removed the equipment while they were already out there.

MORNING START-UP

Before: 15 minutes per man (nine crew members) per morning, equaling 11.25 man-hours per week.

After: 5 minutes per man per morning, equaling 3.75 man-hours per week.

Savings: At least 7.5 man-hours per week.

How'd they do it? During a kaizen event, the staff rearranged the shop in an orderly fashion by putting the items they use most frequently up front.

EQUIPMENT PRESTART CHECKLIST

Before: Though Fultz didn't measure the number of incidents prior to pursuing lean management, he says operators often ran out of fuel or experienced other equipment-related issues that resulted in downtime.

After: Zero cases of equipment running out of fuel mid-day.

Savings: About one man-hour per incident (the time it takes the operator to take the equipment back to the shop and interrupt the mechanic for his assistance).

How'd they do it? The staff members conceived the idea to affix an orange index card checklist to each piece of equipment outlining each step to take before removing the equipment from the shop (check fuel, fluids, tires, etc.).

Lexington Country Club, Fort Myers, Fla.

SCHEDULE CHANGE

Before: The maintenance staff worked a half-day on Fridays and every other weekend, resulting in an average of 15 overtime hours per week.

After: Managers moved the half-day to Thursday and made Friday a full day, which eliminated overtime.

Savings: 15 overtime hours per week.

How'd they do it? Friday afternoon is prime time to complete many unexpected tasks before the weekend, so overtime mounted with the old schedule. By moving the half-day to Thursday, no overtime was necessary.

CUP CUTTING

Before: The cup-cutting process had more than 30 steps.

After: The maintenance staff cut out five steps.

Savings: At least two minutes per hole, which translates to more than a four-hour savings each week.

How'd they do it? By learning how to do process mapping, which entails writing down all the steps in a process, having a group of people analyze them and finding ways to cut out some of those steps to make it more efficient. The crew learned how to do process mapping based on the steps it takes to make a peanut butter and jelly sandwich, and has been able to translate it to maintenance tasks.

LAND CLEARING

Before: Superintendent Laurie Frutchey estimates clearing a plot of land infested with invasive plants would have cost \$50,000 had the club hired a contractor to do the work.

After: By electing to do the work in-house, it cost the club about \$10,000.

Savings: About \$40,000.

How'd they do it? Savings from lean management freed up the time of a number of maintenance crew members, so they were able to do the work in-house rather than contract it out. It resulted in some overtime, but Frutchey says giving staff the extra hours is a good morale booster. "We'd rather pay our employees than a contractor," she says. **GCI**