Loving the Lean Life

by Tonya Vinas, freelance business journalist and former editor of Industry Week magazine.

Don Maier, Senior Vice President of Global Operations and Supply Chain at Armstrong World Industries is leading a lean transformation at the global floor- and ceiling manufacturer as it prepares for a market rebound in the struggling building-products industry.

Q. You have been involved in lean since the late 1980s, working at some of the first non-automotive companies to successfully build lean cultures (Batesville Casket Company, Hillenbrand Industries, and Hill-Rom Inc.). What's different about being a lean leader today?

Fundamentally, the tools and philosophy are the same. It's still about creating a culture focused on continuous improvement and getting up every day to improve safety, quality, cost and delivery. I do see two big differences in the business environment. First, we have significant down cycles across just about every business sector. A key piece of lean is freeing up and redeploying unidentified capacities. That's really difficult to monetize if you're in a down cycle like we're in now because you don't have the opportunity to grow at the rates you did 20 — or even four — years ago. Secondly, business in general is moving at a much faster pace, and the transformations I've been involved with have been moving at an accelerated rate, creating change faster than we would have been able to manage 20 years ago. The global success of lean philosophies has created an environment that is more open to change these days.

Q. Prior to joining Armstrong, you were with TPG Capital, a private-equity group. In this role, you led the lean pilots and manufacturing due diligence at Armstrong. What is it like to be a lean champion in this arrangement?

The difference is not so much about private equity as it is about management alignment and speed of making decisions. Armstrong's lean journey was sponsored and initiated directly by our board of directors. With that buy-in and support of the board of directors — matched up with management commitment — you can really implement radical change rather quickly.

Q. Sounds as if it makes your job a lot more fun. Does it?

Absolutely. I talk to so many people at the TBM conferences, and their biggest problems relate to how do you get the leadership buy-in and fortitude to let the lean transformation take place and not cut and run the first time you have a setback. It's something that people really struggle with, and the private equity environment gives you a great backdrop to get that done.

Q. Do you think that's because the private-equity community has recognized lean as a powerful way to create value?
You bet. There are all kinds of deals that are done in the private-equity space. During the diligence process, significant opportunities in lean for both manufacturing and business processes are usually identified. In those, creation of a lean culture is built into the investment thesis, so you really have buy-in even before Day One of the transformation process.

Q. Your first task for TPG was creating an assessment model to evaluate improvement potential, and then use it to evaluate Armstrong. Where did you begin?
We spent quite a bit of time at Armstrong corporate headquarters getting metrics and data, both quantitative and qualitative. We then took that data and, as best we could, put that into our assessment model. We then conducted six physical site assessments. They were done on the gemba, walking the plant floors with the managers.

Q. What were you looking for that you didn't get from the numbers?
With these gemba walks it is pretty easy for someone with a trained eye to start to see the signs of opportunity. Is there flow, or are there islands of batch? What's the state of work-in-process? What's the frequency of raw-materials replenishment? What's the finished-goods inventory position? Are they building to a schedule or customer demand?

You as well get a sense for the talent of the team. What's the morale of the workforce? What's their pace? What are they doing? Are there tow motors driving everywhere? Or are people working in a synchronous way?

A key thing I look at is lead time from the time raw materials hit the dock to when finished goods are going out the other end. Generally, that gives you an idea of total lead time versus value-added processing time.

At Armstrong they had a strong track record of year-over-year improvements. I was very impressed with the caliber of the manufacturing leadership and Armstrong's world-class performance in safety. The discipline and behavioral change in culture needed to drive their global safety performance convinced me that they could embrace a lean transformation and accelerate their rates of improvement.

Q. And then . . .

The assessment model has several sets of questions that take the subjective observations from the gemba walks and quantify them into specific scores. These scores are then extrapolated across the financial data that was entered to create pro-forma P&Ls, balance sheets, and capacity charts. While it is an assumption-based model, it has been proven to be fairly accurate. The two big metrics are gross productivity and working-capital improvement.

Q. Does the model account for challenges outside of management's control such as raw material prices or a shortage of skilled employees?

Yes. It also estimates the cost to drive the transformation and the degree of difficulty to implement — is it going to be tough drilling or easy drilling, and are there other initiatives that could accelerate or complicate the progress. That's a part that a lot of people miss . . . how difficult is it going to be all things considered?

Q. If the model shows a favorable investment opportunity, and TPG takes the next step — as it did for Armstrong — do you share the results with the management team?

Yes, and management is usually in complete denial and can't believe there's that kind of opportunity. Inevitably, that prompts us to ask, why don't we pick a couple of sites, and we'll go run a couple of week-long events, and see what we can find out? I call these the pilots. These pilots, often involving a number of Kaizen events, open up the door and always show the real potential. The next step is to do a robust value-stream model.

Q. I'm betting at this stage, you have curiosity from some managers and front-line employees, and doubts from others. How do you take the next step to motivate people and get them on board?

The next 100 days are very important. I call it the proof-of-concept stage. You need to pick projects that will drive results that are visible, sustainable, and that will hit the P&L. Then you have economic evidence of what the lean transformation can deliver, and you begin to get buy-in. After that, you begin introducing lean at a couple of other sites. I call this the ripple effect. It's kind of like the camel getting his nose under the tent. Once his nose is in the tent, it's not long before the whole camel is in the tent.

Q. In a multi-plant company such as Armstrong, how do you know where to begin?

You want to stack the deck in your favor, so I look for a couple of characteristics at each site: Is the management team open and capable? Will the proof-of-concept be indicative of what is possible at other sites? And is this a middle-of-the-pack site? You pick a middle-of-the-pack site because if you pick the worst site and show improvements, people will just discount it, and you won't get any credit. Conversely, if you go to the best site, people will say it might work there, but we don't have the skills or ability to get those types of improvement at the other sites.

At the end of the proof-of-concept, you want to have the management team saying this is valid, this really works, and we can make this work across the network of sites.

Q. It sounds easy when you describe it, but no lean transformation is easy. Tell me about a memorable challenge at Armstrong.

At our very first site, we had a bunch of managers in the room for our kick-off presentation. My second slide came up. The first part of it was the definition of lean, and the second part was the definition of kaizen. One well-respected and very intelligent manager, "Bob," raises his hand and says "Don, is this one of these meetings where we can only listen, or is this one of those meetings where we can ask questions?" So I told him we wanted dialogue, and to go ahead. He said "Don, there are two words that make me want to just puke, and one of them is lean, and one of them is kaizen, and they're both up there on your slide."

So we stopped the presentation and had a 45-minute discussion about their prior experience with lean. It was a huge gift from Bob, frankly, because I had no idea about that. So I threw my presentation out, and we chatted about their past experiences and how my approach to lean was different. At the end of the meeting, I told them that if this team didn't want proceed, that was an acceptable answer, but I would be very disappointed. Or, we can complete the value-stream process this week and re-assess on Friday.

Q. Where were you that Friday?

It was one of the best value-stream-mapping processes I've been a part of. The highlight for me was on Friday when Bob came up to me and said "Don, I appreciate this so much. This is so different from what we have done in the past, and I can see all of the opportunities that are out there for us."

Q. Have you or the Armstrong management team been discouraged by the slow and intermittent pace of recovery in the housing market?

Lean applies whether you are in booming times or bust times. It doesn't matter. At Armstrong, we are seeing phenomenal results with relatively flat markets today, and that's making us a better supplier by improving quality and delivery with a much lower cost. When the market does pick back up, we are going to take full advantage. I am a firm believer that lean is a growth enabler if you truly focus on your customer.

Q. What do you like most about leading lean transformations?

It's a blast. I told my wife I feel like I haven't worked a day in eight years. I love seeing people develop and grow. I love to see the improvements through, and then be able to walk away and know the lean journey will continue. ■

Armstrong World Industries, Inc. is a global leader in the design and manufacture of floors, ceilings and cabinets with a focus on innovation, design and environmental sustainability. In 2009, Armstrong's consolidated net sales totaled approximately $2.8 billion. Based in Lancaster, PA, Armstrong operates 35 plants in eight countries and has approximately 10,000 employees worldwide.