WLEI Podcast

Building a Lean Management System at Switchgear Power Systems

Guest: Adam Rens, Co-owner and President, Switchgear Power Systems
Hosts: Josh Howell, President, Lean Enterprise Institute; Roberto Priolo, Director of Communications, Lean Global Network

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JOSH HOWELL 00:17

Welcome to another episode of the WLEI Podcast. My name is Josh Howell, president of the Lean Enterprise Institute. I'm thrilled to have you with us, and also thrilled to have a co-interviewer, Roberto Priolo, director of communications for the Lean Global Network. And most importantly, our guest for this episode: Adam Rens, co-owner and president of Switchgear Power Systems, in the grand state of Wisconsin.

Thanks for joining us, Adam, and thanks for leading us through the conversation, Roberto. With that, I'll hand it over to you.

ROBERTO PRIOLO 00:53

Great to be here with you. Adam, let's jump right in. First of all, tell us a little about yourself and about Switchgear Power Systems: the products you make, the customers you serve, and the nature of your operations and processes.

ADAM RENS 01:08

Sure. I've been with the company since 2012. I started as a project manager and then moved into marketing and business development roles, building out our sales rep network and getting approved with customers around the country. There's typically an approval process where customers vet your capabilities and products.

I became executive vice president at the beginning of 2021 and took on leadership of the entire operation, then moved into my current role in 2023. The company has changed a lot since I've been here. When I started, we had about 50 employees. We now have about 400, all on one campus here in Winneconne, Wisconsin.

Our customers are large consumers, distributors, or generators of power. Large consumers would be data centers and industrial facilities. Distributors are utilities, like Pacific Gas and Electric or ComEd. Generators are typically renewable energy facilities: battery energy storage, solar, and wind.

It's very large physical equipment, with a footprint of up to 25 feet wide by 80 feet long, shipping in multiple pieces. We have some smaller-scale products that are manufactured to order, but most of what we make is engineered to order, specific to the customer, and differs from project to project. Our customers value reliability,

because without the equipment they can't power their machines or get energy to their customers.

Our niche as a smaller manufacturer is our willingness to do more engineering than larger companies. If a utility customer has a very specific spec, we're willing to take the time to engineer it, knowing there isn't as much volume as a major manufacturer would want before doing that engineering. That's how we found our niche in the marketplace.

ROBERTO PRIOLO 03:26

In terms of lean, when did you first hear about it? What was the trigger? How did you recognize that lean could help you, and how did you get started?

ADAM RENS 03:37

I'll give a shout-out to my dad. He was a lean practitioner in appliance manufacturing in the 1990s and early 2000s, so I've known about lean for a long time. I'd tried different things, but I didn't really know how to get a lean transformation off the ground. When I first started dabbling with it, my dad gave me a copy of *Learning to See*, the LEI book his company had used to learn value-stream mapping.

But it was more what you'd call the traditional management approach: using a few lean tools rather than using lean as a management system, which is what we've learned since we started working with LEI.

At the end of last year, I really felt that we were growing very fast and I wanted the people on my team to develop more capabilities. We had dipped our toe in the water with hoshin planning, but as we've learned in the months since we started, hoshin without the other pieces, like A3 capability and daily management, is only one leg of the stool. It doesn't support itself very well.

So I was looking around, found the Lean Management Program, and saw that you could also get on-site coaching. We had a conversation with Karen, hit it off, and decided to start an engagement with LEI. It was a matter of wanting to improve all of our capabilities. We need to be able to scale our business and our management system as we get larger and keep adding people.

ROBERTO PRIOLO 05:09

One of the questions I was going to ask was what initial problem you were trying to solve. It sounds like, in the face of very fast growth, you wanted a strong foundation to build on, namely strong capabilities in your people.

ADAM RENS 05:22

Yes, and I've always believed that lean is the best way to do things. The problem was making our management system more robust and scalable so we could support our customers' growth. Our customers are growing just as fast as we are; that's why we're growing so fast. Our philosophy was that if we can't support them, they'll find somebody who can. So we have to be able to meet their needs.

JOSH HOWELL 05:48

Adam, what were some of the barriers to growth? It sounds like customer growth may have outpaced what you were capable of. If there's a struggle you had with a customer, or a lost customer, that would help us understand the growth challenge you've been dealing with.

ADAM RENS 06:17

It wasn't so much losing customers. Maybe some lost orders. It was really that our lead times kept getting longer and longer. Thankfully, our industry had somewhat gotten used to long lead times because of COVID, but we felt it was a risk to our business to keep extending them, and eventually it would catch up with us.

Our engineering lead times are also quite long, since everything is engineered to order. A sales rep actually told me we have the industry's worst lead times, which is not a nice thing to hear. So improving lead times was a big one.

ROBERTO PRIOLO 06:58

How long ago did you start with LEI?

ADAM RENS 07:01

We started the Lean Management Program in February 2026, and the on-site engagement started in March.

JOSH HOWELL 07:09

Was there lean activity happening before that? You mentioned a tools mindset early on. Were there tools you were familiar with and dabbling in, or were you really at ground zero when you entered the Lean Management Program in February?

ADAM RENS 07:30

For all intents and purposes, we were at ground zero. We'd done some value-stream mapping events in the past and attempted some DMAIC problem-solving initiatives, so we had used tools like that. But there was nothing happening on a regular basis, not even a monthly kaizen event. We had done it along the way, but at random times, on random problems.

JOSH HOWELL 08:01

For listeners who may be unfamiliar with some of what Adam and I have mentioned: LEI's Lean Management Program helps business leaders learn what we consider a complete lean management system. That includes how you manage the business for the long term and how you manage day-to-day operations. And within both, it covers processes for solving the problems you will inevitably encounter: A3, DMAIC for certain issues, or more practical problem-solving on the shop floor.

It's a months-long experience that covers all those bases, so participants can see the gaps between what they're doing now and what a complete lean management system might look like, and then set out to close those gaps.

ROBERTO PRIOLO 09:02

Adam, you've been familiar with lean for a long time through your dad. What about your people? When you started learning about lean, how did you manage learning it while also trying to apply it? What did you encounter on the learning curve?

ADAM RENS 09:23

It really helped that I went through the Lean Management Program with the rest of my team, so we were all learning together at roughly the same pace. At Karen's recommendation, my team was also engaged with her from the first on-site visit. She said, "If you really want this to sustain, you have to start with yourselves and develop some lean technical chops as an executive team." So it wasn't something I was learning in a vacuum and then bringing back to them. We were all going through it together, which really helped.

The most challenging part is that while we're learning the basic thinking and challenging some of our previous assumptions, you have to apply it to your own situation. You can't take somebody else's situation and place it on top of your business.

To me, lean concepts and thinking are very simple. I like the phrase "simple, not easy," but "not easy" isn't a strong enough word. It's actually very hard. We know the framework of daily management, for example, but how do we map it onto our situation?

JOSH HOWELL 10:50

It's cool to hear about Karen's advice on how to go through the Lean Management Program. Did that take any convincing? When she made that recommendation, were you thinking, "She can't be serious, surely I can delegate this to my team"? Or did it resonate with you, given the kind of leader you are and your experience?

I ask because some leaders who hear advice like that would delegate. You didn't. I was part of that class, and I think that's the first time we met. I remember your team being present and participating, and I'm sure there were conversations between the

weekly sessions. Could you talk about how it played out, from Karen's recommendation to your decision and then the experience itself?

ADAM RENS 11:54

Honestly, it took no convincing. I wanted to be part of it and had always planned to be. There might have been a little skepticism among some people on my team, but not much. Generally, we were all hungry to find a way to improve our situation. Fast growth can be scary, and I think people saw this as a way to make us more likely to succeed over the next couple of years.

If there was any skepticism, and this may not apply only to my team, it's that you have to get past the fact that we're engineered to order and everything is different. Some people perceive that lean only works if you're doing high volume or the same thing over and over. To defuse that, I point out that one of the reasons Toyota went down the path of the Toyota Production System is that it had to handle more variation on its assembly lines than a company like General Motors. It was actually designed to support variation.

JOSH HOWELL 13:11

You mentioned that your leaders were motivated, along with you, to start learning and trying things. Was it simply the realization that industry growth was bringing growth to the business, and there was fear about the company's ability to manage it? Or was there more to the motivation?

ADAM RENS 13:39

Growth was part of it. We had been meeting our targets and taking care of our customers. Our on-time delivery wasn't what we wanted it to be, but it wasn't so bad that it was driving customers away. It was just very chaotic: a lot of firefighting and not a lot of root-cause problem-solving. Troubleshooting and firefighting were how we solved problems. So it was really a desire to get better, make things more sustainable, and maybe ease the pain a little.

ROBERTO PRIOLO 14:22

Following up on Josh's question, what do you see as your role as president with regard to lean? How hands-on do you think you need to be, or plan to be, as your people get used to a different way of working?

ADAM RENS 14:40

I think I need to be very involved, because what we've learned is that lean is the management system. If I'm the president and co-owner and it's my role to manage the business, I should be an active participant in the management system.

To that end, I'm leading the hoshin kanri planning we started at the end of September. I know some CEOs have a chief of staff or someone else lead that

process, but I'm choosing to lead it, at least initially, for my own learning. I want to have led it a number of times.

I'm not as involved in daily management at the front line, given the nature of my role, but I like to know how it's being done and that it's being done. My philosophy on daily management is that I'm not going to tell you how to do it. The only non-negotiable is that it has to be done. We can talk about how it will happen, the cadence, and who attends the meetings, but whether we have a daily management system is not a choice.

I also enjoy being part of the activities when Karen is on site. I did some three Cs work, which, for those who don't know, is documenting every step of a work element and then charting whether it's unsafe or difficult, and whether it's value-add or waste, including necessary waste, like taking something out of a package or running the first four threads of a screw before you finally torque it.

So yes, I plan to remain involved. I really enjoyed the first kaizen event Karen led. There was a ton of energy. We worked on improving how we wire a specific door in our model line. We're fortunate to have a product we build nine of a month, and they're all the same, so it's an opportunity to build a model line.

JOSH HOWELL 16:53

When we talked about the primary problem to solve, you described a growth condition and concern about capabilities, both in how management works and in how leaders behave. You also called specific attention to lead time as critical to your customers, and to long lead times in engineering in particular.

But now you're talking about a model line for a product you make nine of per month, which I gather is relatively high volume for your business, where engineering lead time is less of an issue. Is that your highest-volume product?

ADAM RENS 17:50

Yes.

JOSH HOWELL 17:51

OK. So for your highest-volume product, are you also doing something in engineering? If engineering lead time was a major contributor to your overall lead times and to customer frustration, especially in this growth condition, could you talk about that?

ADAM RENS 18:14

Yes, you're right. On the operations side, we're building the model line. But part of our strategy is to keep growing other business, supporting existing customers and bringing on new ones, which requires engineering. We made several attempts to improve engineering lead times over the last 12 to 18 months, with limited success.

About three months ago, we started looking into lean product and process development. One of our initiatives for next year is to improve our project management framework, and a big part of the front end of that framework is the engineering cycle. We're working on how we process a job through engineering, doing more steps in parallel instead of a waterfall where one process has to finish before the next can start.

The question is how we get information stable earlier in the process. It doesn't have to be 100% complete, but it has to be stable for the different engineering disciplines, and even for sourcing. So, in parallel with creating the model line, we're working to improve our engineering processes and shrink those lead times.

JOSH HOWELL 19:46

Nice. I imagine those engineering processes will mostly feed products that aren't in your model line. If the model line is for high-volume items where engineering is more or less done, you're just turning out those nine per month. The engineering work may benefit the model line somewhat, but it will primarily feed other lines.

You're going to learn a lot through the model line, and you have this upstream work in engineering. How have you thought about the path from what you learn in the model line to other lines, and from the engineering work into those other lines?

ADAM RENS 20:44

That's a good question, because you're right. The improvements we make in engineering will have minimal impact on the model line, since its engineering is done. There may be an occasional small change, but nothing that takes considerable time.

One of the hard things about applying lean thinking to your own situation is that, yes, the doors we wire may differ. Components may be in a different spot, or there may be more of a certain component on one door or panel. But the way you crimp a wire can always be the same, and so can the way you attach a wire to a component. So we've created what we call fundamental standard work: this is how SPS crimps a wire, this is how SPS strips a wire. That will apply to other lines.

I think the biggest benefit from the model line work will be the capabilities people are developing: observing work, documenting work elements, looking at steps and asking whether that work is difficult, and if it is, trying to eliminate it immediately. Being able to categorize steps as value-add or non-value-add matters, because you can't eliminate non-value-add work if you can't spot it.

That's what I think will impact the other lines most. I don't have a vision in my head of exactly how it will work in the other lines, but I think it will take shape as people develop these capabilities. When they get to those other areas and start applying them, they'll figure out how to improve the work.

JOSH HOWELL 22:43

You mentioned that you participate in the model line activities and really enjoy them. I assume there's a thread of line management from the frontline worker up to you in that model line, and you also have line managers on other lines. How are those line managers gaining the capabilities you say will help not just the model line but the other lines too? How are you making sure those capabilities get built across the organization, not just where you're focused?

ADAM RENS 23:33

We've made an effort to cross-pollinate the model line work. We've brought supervisors from other parts of the plant into improvement activities. For example, a supervisor from another area participated in the four-day door wiring improvement activity I mentioned. That gives them experience, and it brings fresh eyes. They don't live in the model line, so they bring a different perspective and may see things that people who work there every day don't. It's not revolutionary. It's the simple step of engaging them in these activities and learning with Karen.

ROBERTO PRIOLO 24:25

I know it's early days, but have you already observed an outcome, a particularly interesting change in how you do things that has produced positive results for the business, tangible or intangible? People often talk about culture change: how they interact and communicate with one another. Does anything resonate?

ADAM RENS 24:54

The most tangible thing for me, though it's not fully developed yet, is that we've created standard work packages for certain areas of the model line. It's very important that we've proved to ourselves we can do it, because it's a lot of work.

One challenge in the model line has been staying focused. As we've learned from Karen, and as you know, standard work is the foundation of a kanban or pull system. There's a desire to jump ahead: we should have a pull system, we should have kanban. I'm trying to keep the team disciplined and focused on the fact that we can't do any of those other things until we have standard work for every work element in the model line.

So being able to do that for one area is the most tangible proof that it's possible. We have very long cycle times; the takt time is around 44 hours. When you set out to create standard work for something with 1,500 hours of wiring in it, it's a daunting task. You just have to take it one step at a time, and we've done that.

JOSH HOWELL 26:34

Has there been any measurable impact? Roberto pointed out that it's still relatively early, but has there been any measurable impact on lead time? That was the main issue, right?

ADAM RENS 26:46

I would say yes, as measured by the fact that we're ahead in the model line. We're producing nine a month, and we could produce more in the same footprint if we needed to.

JOSH HOWELL 27:01

Nice. So you're gaining stability and reliability in your processes that let you meet whatever demand happens to be. That kind of flexibility.

ADAM RENS 27:08

Yep.

ROBERTO PRIOLO 27:15

What about learnings? What have you learned in these last few months that is really informing your way forward? What has surprised you about this different way of thinking, and what has it taught you about running a business and even behaving as a leader?

ADAM RENS 27:37

A lot of my learning has been on the tactical side of lean: what a standard work package consists of, what kanban truly is, how a pull system works. Also, that at its core, lean is about the customer first, and that lean is a way to show respect for your coworkers and employees, because you truly care about improving their work and eliminating difficult work.

I remember one of the first times Karen was on site, we went out to observe a woman wiring a door. I was staring at her hands, watching her terminate connections, and we got some video. Back inside, Karen asked, "Was there anything difficult about that work?" I said, "I don't think so. She's just standing there wiring." Then Karen showed me a picture of her standing on her tiptoes as she worked and asked, "Do you think that's hard to do for four to eight hours a day?" I said, "That's a good point."

So even small things, like learning how to actually observe work and what to look for. I was so focused on her hands, because that's where the so-called value-add work happens, that I failed to notice she needed a step stool or something to stand on so she wasn't on her tiptoes.

The other learning goes back to the idea that it's about the customer first. In the model line, we had some healthy disagreement about what the wiring standard should be. What does clean wiring look like? What does good wiring look like? It helped to frame that not as what we want it to look like, or what a particular wirer prefers, but as what provides the most value to the customer. There could be times when you're over-processing the wiring. In your opinion it may look better, but it isn't something the customer values. Being able to frame conversations that way is

very helpful.

ROBERTO PRIOLO 30:01
Absolutely. Looking ahead, what do you think the next major challenge for Switchgear will be, and how does it relate to lean?

ADAM RENS 30:13
We touched on it earlier when Josh asked how we'll translate this into other areas of the plant. As we move into areas that are less repetitive, figuring out how to use standard work and do many of the same things we do in the model line, without the benefit of that repetition, will be challenging. But I truly believe we'll figure it out and that it's possible.

A friend of mine had a funny line about lean. I was saying, "Well, we're engineered to order, we're custom," and he said, "Do you do anything?" I said, "Yes, we do something." He said, "Then lean works."

JOSH HOWELL 31:00
I like that friend. We need to invite him to dinner sometime. Do you do work? Do you have a customer? Do you make something for them? Then lean is applicable.

ROBERTO PRIOLO 31:13
Very good. Something else I wanted to ask, Adam: what have you found personally challenging about lean as a leader? And do you feel your way of thinking and behaving as a leader has evolved since turning to lean?

ADAM RENS 31:30
That's a great question. The hardest part for me has been changing my own behaviors and the way I do things. It's a work in progress. Along with the model line and the engineering work, we're developing our A3 problem-solving capabilities.

One personal goal and need of mine is to do a better job coaching people on my team through their A3s, with a better cadence. It's not a habit I've had: seeking them out and regularly checking in to make sure they're making progress. That ties back to your question about how involved I want to be. Lean is the management system, so I'm going to be involved, and I have to change how I approach my role just like everybody else does.

ROBERTO PRIOLO 32:29
That's great. One final question from me, and then I'll hand it back to Josh. Based on what you've learned so far, what would you share with leaders at other organizations who are getting started with lean, as you did a few months ago?

ADAM RENS 32:47

You have to be all in. It's the management system for the business, so it's going to replace something. It isn't an "and," it's a replacement for something you're already doing. Every business has some kind of management system, whether it's well defined or not. They're doing something every day. That's daunting, but in a way it's also comforting that this isn't in addition to something else. It replaces many things.

So you have to commit to it, and you have to be comfortable not always feeling progress. Some days I feel like we're doing really well, and other days I wonder whether we're actually making progress. It's a bit like boiling a frog. You'll never be able to shine a light all the way to the end of the journey. You just have to be willing to put one foot in front of the other.

Karen talks about shining the flashlight right in front of your feet as you walk to California. You can't shine it all the way to California and see the whole path. That's really true. Sometimes you can't feel progress, but then you start seeing results. You see a standard work package created, and you realize you're actually creating tangible things out of this.

JOSH HOWELL 34:15

And all of a sudden you're in California. Los Angeles, perhaps, March 16 and 17, at the Lean Summit.

This has been outstanding, Adam. It's remarkable to me. I think we first met in February, as part of the Lean Management Program class. It was a large group, so we didn't have a chance to connect directly at the time. But think of all the areas of your business where you've begun to practice lean: downstream in operations, upstream in product development, and all the way up into the strategy and long-term planning work that you lead. Here we are in the middle of November, ten months after you entered the Lean Management Program, and you've already brought lean experimentation into all of those areas.

I don't know that you're in California yet; that may have to wait until next March. But from where Roberto and I sit, it's remarkable. Kudos to you and the team. I hope you can step out of the day-to-day, maybe through a conversation like this, and recognize through reflection how much has been accomplished, how many people have learned, and how relevant that learning is.

While Roberto was asking questions, and I asked quite a few myself, I was listening for the ways that you and the team, with Karen's support and others from LEI, are addressing the questions that, in our experience, organizations need to address to succeed on the path of lean transformation.

At the start of our conversation, you were clear about the growth in your industry and with your customers, the resulting growth of your business, and the challenge of

lead times in that growth condition, specifically in engineering. So the problem you're trying to solve, the one driving your lean transformation, has been clear.

On the process you're trying to improve and how, you described developing a model line for your highest-volume product, built nine a month, and new work directly tackling the upstream engineering process. We also discussed how that will feed other lines.

On capability, you're participating yourself in work observation, analysis, and improvement, down to how a screw gets threaded into the product. Whether bringing your team into the Lean Management Program or involving people from other areas in model line activities, it's clear you recognize the importance of building your own capability, which is commendable for the head of the organization, and also the capability of everyone, including those whose areas haven't yet been directly affected. You know that impact is coming, so before it arrives, you're involving them in the model line to prepare them for the work observation, analysis, and standardized work development that will be critical in their areas. That's a lot of cross-pollination.

Clearly you're taking a leader-led approach, which we always recommend, and we admire leaders who step into that uncomfortable learning space to demonstrate it. Karen's advice was that if you want a lean transformation of your company, it needs to start with you. Clearly that resonated, and your commitment to your own development, as painful and challenging as it can be at times, is very commendable.

On the management system, you talked about managing the business for the long term with hoshin kanri and day to day through daily management. I really like what you said about daily management not being yours to own; it's for your line management to own. What is yours to own is setting the expectation that we will manage the business daily, look for problems, and respond to them. Having that clear direction while recognizing what is and isn't yours to own is really interesting.

I also jotted down some of the basic thinking underlying what you're doing. You talked about respecting the people in your company by paying attention to their work and making it easier and safer to do. That's respect not just through being nice, but through tangibly engaging with the work people do, on their tiptoes at times, and finding ways to make it better. That's meaningful to people who spend eight hours a day, week after week, doing that work.

Leader-led, team-based learning is clearly a principle. And going all in: lots of people dabble with lean. But to accomplish what you've accomplished and tackle big problems like lead time and growth, dabbling with tools won't get you far. You're going all in, bringing the team along, and participating yourself.

Finally, you said you've had to learn to be comfortable in what I'll call a state of learning; you framed it as not always clearly seeing progress on your journey to

California. That's an important reminder for all of us. This is hard. It creates discomfort. It moves us into a zone where we can learn, which likely means a zone where we don't yet know how to be effective. That's uncomfortable. Having a leader willing to go into that space, even publicly on the model line next to colleagues, is not something we see with every leader. There have certainly been times I've avoided that kind of discomfort myself.

So I wanted to offer that back, as a mirror from LEI's perspective, using something I know is familiar to you, the Lean Transformation Framework. You have things happening in your business, personally, with your leadership team, and across the broader organization, that address each of those LTF questions. It will be great to keep supporting and witnessing you and the company along this path, and to see whether our theory of lean transformation holds up: that continually asking and addressing those questions puts organizations on a productive path.

Thank you so much for taking the time, and thanks for being a partner. We look forward to future opportunities to share your story; we talked about one earlier today. I'm excited to see what you and the team accomplish as you bring the engineering improvements into the other lines and get more people involved.

ADAM RENS 42:38

Thank you. I do want to give a big thank-you to the people who work for us. As I'm recording this podcast with you, there are about ten people out on the model line: supervisors, team leads, industrial engineers, and other managers. I want to thank everyone putting in a lot of time and effort so we can make progress. I appreciate the feedback on how much we've done in ten months, but it's because many more people than me have been involved. Huge shout-out to them.

JOSH HOWELL 43:08

Hard work for them, and discomfort for them too. This isn't just something you're experiencing. Thanks again. It's been wonderful to sit down and hear your story and learn more about what's going on at Switchgear.

ROBERTO PRIOLO 43:15

Thank you, Adam.

ADAM RENS 43:20

Thanks for having me.