

# Robert Brusetti



Vice President of Professional Services  
at Doble Engineering Company

Interview with **Robert Brusetti**



Photo: Doble Engineering Company



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**Alan Ross:** My guest today is Robert Brusetti, Vice President of Professional Services for North America at Doble. We're at the Doble Client Conference 2024.

I understand it's the largest attendance you've ever had.

**Robert Brusetti:** Yes, it is. It's a very impressive attendance that we have this year. It covers a lot of the North American client base.

**AR** I've been in the industry about 20 years. This industry has gone through more change in the last five to seven years than it has in a hundred years beforehand.

Where are we now? Where do you think it's brought us to?

**RB** It's brought us to a point where we're in a bit of a panic mode. During COVID, things shut down. We weren't doing a lot of stuff. I saw it in our professional services business, where we weren't doing as much visits to clients. Clients weren't engaging with a lot of training. We were trying to do training through virtual means, which doesn't really replicate being on site. Right now, we are making up for that time during which we were in a lockdown period. Add to that this drive to electrify the system, going with EVs, pushing renewables. It's causing the utility industry to do a lot of catching up, introducing new technologies, and a lot of scrambling to get the assets they need to support this growth in the electrical footprint.

**AR** Assets like transformers are now two, three, sometimes four years out, and you're not going to change that dynamic. That means the assets that you do have in place are more critical than ever. And there is the idea of good data to do good maintenance, etc.

You mentioned the difference between COVID and the non-COVID is we thought we could do everything digitally online. What we found is we can't. I know you got some incredible engineers that go out and help solve problems for people, but having that professional out there having that training hands-on, being at the utility at the site is incredibly important, right? Talk to me a little bit about what you learned coming out of COVID.

**RB** It has made us more willing to accept work remotoring to begin with, and having the tools. I'm not going to plug one tool over another, but the tools we have today allow us to do things that, before, we were reluctant to use. They might have been there, but we weren't using them as much. We had webinars, yes, we

did things, but we didn't do a lot of things like we do today. We might have a meeting in the office, but we all stay in our offices because it's just easier than going to a conference room. It has made me more accepting to having key people remote. I always felt that people needed to be at the office, and I still feel that way, but the ability to communicate, to give remote people the ability to feel like they are in the office is much better today than it was.

I think the tools we have today are better to accomplish that, to see who's available, a little green or red light shows up, and sometimes people play game the system though, they're always red. There's that ability to also do some level of management. We've implemented the tools now that, if somebody calls the main number, that automatically goes to an available engineer. It also doesn't just go to the first available engineer just because his last name it begins with an A. It keeps track of who we gave the call to so that we make sure we evenly distribute stuff.

One of the things people were always concerned with, primarily before COVID, was finding contact information. Post-COVID, here's the number. When you call the number, press one, you're going to get an engineer. We've really learned to utilize those tools much better.

**AR** Excellent, because what comes to mind for me is, we've learned how to collaborate differently, remotely, to bring in experts to do the kind of thing. Before we started this, you brought up that the deregulation that we went through is similar to what the airline industry went through.

**RB** To some extent. When Ronald Reagan deregulated the airline industry, some airlines fared poorly because they were serving markets where they were guaranteed a certain price, and a number of airlines went out of the business. But overall, with the exception of COVID, flights have become more cost effective. People will complain about the services, but we're getting great value in a seat on a plane.

When we deregulated the utility industry, I used that as a model to see how it was faring, but I was quickly corrected that the difference between the airline industry and the utility industry is the airline can decide to fly into a city and not fly into a city, whereas the utility has to serve that person. They have to invest no matter what, but I think the utility industry overall has become far more efficient due to deregulation. But deregulation for the utility industry is a very different model than the airline industry. They have certain restrictions.

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**I THINK SOME OF THE HEADWINDS WE'RE FACING TODAY IN TERMS OF OUR TALENT BASE AND TRAINING IS A RESULT OF LACK OF INVESTMENTS WE MADE AS WE TRANSITIONED OUT OF DEREGULATION, WHICH WAS ALMOST 30 YEARS AGO... UTILITIES ARE REALIZING THAT THEY WEREN'T DOING THE ADEQUATE TRAINING... IF YOU WANT TO BE A KNOWLEDGEABLE, VALUABLE TRANSFORMER ENGINEER, YOU EITHER GOT TO HAVE A UTILITY THAT'S WILLING TO INVEST A LOT IN YOU TO GET UP TO SPEED, OR YOU GO WORK FOR AN OEM.**

When they want to raise rates, they have to go to a committee or a council, and they decide if the rates go up.

I think some of the headwinds we're facing today in terms of our talent base and training is a result of lack of investments we made as we transitioned out of deregulation, which was almost 30 years ago. We're dealing with assets with long life cycles, you're not seeing the immediate effect of not investing in certain things. A lot of what we're seeing today, such as these rooms packed with people, is because they finally realize there's so much to learn, and the utility industry doesn't have a lot of avenues to get trained.

Transformers are much more complicated than what you learn in a textbook. The world has only a couple hundred true transformer experts that understand transformers very well. That's an extremely limited pool. Utilities are realizing that they weren't doing the adequate training. Essentially, if you want to be a knowledgeable, valuable transformer engineer, you either got to have a utility that's willing to invest a lot in you to get up to speed, or you go work for an OEM.

**AR** That number of experts is decreasing every year because most of them are over 60.

**RB** Unfortunately, in the last six months, we've lost two of them in our industry. When it happens, everybody knows, it's not like a Vice President of Professional Services, they're a dime a dozen [laughter].

**AR** We've now got up to where we are now. What are the challenges, the opportunities on front of us? What do you think the next five to seven years look like in the power industry?

**RB** It's a steep learning curve, and I hope that people understand it. I think the industry has to do a better job of attracting talent. We're competing with a lot of glamorous technologies. The kids come out of college and they are going to these industries, and we compete with them, because we need engineers as well.

If you look at the utility industry, a lot of people that are in the field, trained by the utilities, move up. Not having the tools of an engineer, or somebody who's been trained in the discipline, you're going to struggle adapting to some of the technologies that come along.

We have to bring renewables into the industry, which is introducing challenges to moving power from generation to where it's needed,

because we don't have the various components in the grid that would naturally allow the power to flow to the load, so things have to be done to the grid to push the power in the direction you want it to go, something we never dealt with much in the past. The systems are quite complicated, and I find utilities that require this technology or this service have to outsource it, because they lack the talent in-house to do it. A lot of utilities are becoming more and more dependent on outside talent.

I don't want to criticize it too much, because that's how I make a living too. But that's the reality, that's where Doble is positioned nicely, because we don't build the product that is used to generate, transmit, and distribute the power. We can step back and be an independent view of the whole thing, because we don't really have skin in the game.

That's why there are a lot of people at these events, because we stress and review every presentation before it's made to make sure it is technically solid. We don't allow commercials, though something sneaks in here and there, but it is 99% pure technical experience here. We don't allow certain parties to come to certain meetings, because we know they have a vested interest in the discussion, so the people that have issues with these assets can speak freely.

**AR** I've got two points I want to follow up on. One of them is this open architecture. Nobody's going to have a solution that a utility can buy and say, hey, that's the whole solution, because they have equipment from so many different manufacturers. They don't want to rely on any one vendor. They want to make sure they can take data from all of the different assets.

The second theme is power quality. When we look at the system, we have this step-down system, down to the rate payers. Now the rate payers are becoming not just consumers, they're becoming prosumers. Power comes back up.

Some of the utilities' ratepayers are now their vendors, which complicates things, and it introduces an enormous amount of harmonics and transients into a system that we're still trying to grapple with.

**RB** Let's touch on the ubiquitous system. From a data perspective, you're absolutely right, they want data from all the sensors they put out there to come back on a platform into a database.

The problem is, you got all the data. What are you doing with it? There's a lot of value

in there; how are you going to digest all that information? This is where you're hoping that some sort of intelligence or mechanism can help you. Right now, we're really taking advantage of 1% of the data we have out there. Having a mechanism gets us beyond that, even doubling and tripling it.

The biggest problem with that is first digesting. Is it good information or is it just noise? We have a couple million data points just on a particular test done on a transformer. That's a lot of data that's easy to digest because we already understand where good or legitimate numbers exist. You get a million data points; you throw out 10,000 data points because you know it's garbage because it doesn't fall within this window. It's not that easy in a lot of other areas. We don't have that expertise.

It's a two-part answer because the people at the level that have to design the system will say, No, I need a transformer that meets my specifications. I can't buy a transformer from just anybody. Yes, if I'm buying a little pad mount that feeds a small building, you can buy those off the shelf. If I'm buying a big transformer that's going to be gigawatts of power, I need a very customized design for my system, because in America we didn't develop all our systems that behave the same way. That's why transformer manufacturers are out three, four years, because it takes a long time to build a custom thing.

The second question is power quality. The biggest problem with power quality is, the prosumer has to understand that what he pays for the power coming into the house is not what he's selling the power for. The utility has a cost in moving it.

You're absolutely right that the utility needs to maintain a certain amount of power on the grid, because nobody wants to flip their switch and the lights not go on. We want 100% reliable power. The utility has to plan for how much power they have on the system, so they don't have a really good feel when all these very small power producers are pushing power onto it. And then a cloud comes by and things change.

They're doing a very, very good job, by the way, using modeling, using weather type information to kind of predict what short-term power they have on their system. It's still a problem because you're down at the distribution level.

They're used to their power being at a different part of the system where they could control it much better. At the end of the day, utilities



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still have to keep their generators or sources of power available, even though they don't need it, because they have to maintain what's called a spinning reserve, because you don't know when something's going to come off, but you got to keep the lights on.

The other problem they're having is power is going in the other direction now, and the system was designed to go in one direction. It's adding another level of complexity.

You mentioned harmonics. There's a lot of harmonics, and some equipment is very sensitive to that. At a high voltage level, harmonics do a lot of damage to power equipment.

**AR** Thank you for that feedback.

I've got one last thing for you. We're here at

the Doble Client Conference 2024 in Boston. Largest conference you've ever had, right? Over 1,300 people here.

You're the guy that needs to make sure all of those different presentations, all of the collaboration goes well, and you already said it, this is a no-sale zone, right? Getting all of these utilities to share with each other and capturing that, that's great.

Talk a little bit about what your expectations were, and how you are feeling right now that you're in the middle of it.

**RB** It seems to be going smooth. I kind of set the tone, but there is a group of engineers, which I refer to as our client services engineers, that are dedicated to this. They understand they serve a role in this industry, and they are the people who have to capture the information and then distribute it out.

I've been at this company, it'll be 35 years in August, and it was instilled in me from the very beginning that we are the stewards of this information. People are entrusting us in capturing the information and then turning around and making it available to them. You can go back and look at the first conference from 1934. We have books on that information. We've converted everything from 1958 to now electronically, so you can get access to it very quickly. If you want something before then, we'll help you get it.

This fall we have a smaller meeting with about a hundred and fifty people, primarily managers and asset managers, engineers. We get together and decide on the program. It's a full week of, let's see what your issues are. What do you have going on? What have you learned? What's working for you? We put that all together, and it ends up creating this program. We have 51 technical papers throughout the week, along with other things going on, and people are presenting it. I'd say

maybe a third of them are Doble papers. Another third are papers that Doble help a client write, and the other third are clients that do it, or an OEM that has addressed an issue and wants to present the solution.

It all goes back to why it is so successful this time. There's been an appreciation that there's not a lot of avenues for power engineers to continue to evolve in their profession. The people in the industry and the managers have realized that. We're co

**AR** It has been a delight, Robert.

Thank you for putting this conference on and thank you for inviting us to come here and be a part of it.

**RB** Thank you for the opportunity to present our point of view.