# CW

## CompositesWorld

**Breaking the Inspection Bottleneck:**

# AUTOMATION UNLEASHED

**FEBRUARY 2018**

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**An excerpt from the *CW Talks* interview with Avner Ben-Bassat about making a big difference using Big Data, plus *CW*'s report on December's info-rich Carbon Fiber conference, and news of another supersonic aircraft, this time in the business jet sector.**

## Q&A: Avner Ben-Bassat, president and CEO, Plataine Technologies

*Editor's note: As composites move increasingly into higher volume, automated manu-facturing environments, the need for good process and data control also increases.* CW Talks: The Composites Podcast *offered its forum to Ben-Bassat, who spoke about Industry 4.0, the digital thread and how to get started managing, and making sense of, manufacturing data. Excerpts follow. To listen to the entire conversation, search for CW Talks on iTunes or Google Play, or visit* **www.compositesworld.com/podcast.**

Source | Plataine Technologies

**CW: How does your software collect data and how is it used?**

ABB: A lot of companies collect data, which is very intuitive and makes sense. But the key is, what do you do with the data? We look at this from a practical, problem-centric point of view. .... We want to know what is actually happening. Here, we use sensors, to tell us what is going on, where are the materials, where are the parts, what's their condition, what's the situation? And we get data off machines as well. .... And yes, some of the data needs to be received from the operators, so we give them an appli-cation. But the point is that the data is digital data. If it is on paper, it really is useless for us. So, we want data, want data in digital format and we want data in real time. Now, once we have the data, we want to put it in context, and context is fundamentally the key here. If we're tracking a material and material number one is at station number two, is this a good thing or is this a bad thing? It's great if it's supposed to be there, but it's horrible if it needs to be in the freezer because it's about to expire. So, for example, we can raise an alert and I can tell you that material 123 is going to expire. It's prepreg, it has 20 hours to live, and I will tell you that it's going to expire. ... But what if tell you that you have a problem, or about to have a problem, but what if I also tell you the solution?. .... So there is a major leap here — a revolution — of how we can run the produc-tion floor by digitizing the process and then elevating it to helping production floor staff make better decisions.

**CW: You are creating a digital thread, are you not?**

ABB: A digital thread, in plain language, is the history of the making of the part. ... As we move down the produc-tion line, we are capturing that information. We use a lot the parent-child analogy. The materials are the parents and the part is the child. When this child is born, two very important things happen. One, we have a new entity to track and optimize, because the materials will go back in the freezer and the part will go on to the autoclave or beyond. But the other thing that happened is that the part inherited a lot of the parents' DNA. It inherited the material number, the batch number, the remaining shelf life. .... And we have captured all of that history. .... The implications for quality and operations are huge. .... Let's say that you're in production and suddenly a part fails a quality check, and you run it to the lab and you realize that it had used a bad batch of material. So, now you need to disqualify the part, but what you also need to do is find all the other parts that had used the same material. So, you need to go back and find the source of material and then find all the other children of that material. In today's environment, this can take hours or days. The bigger problem is that during these days, you continue making bad parts. .... And the worst is that at the end of all that, you're not sure you found everything. In our world, with a real digital thread, it's a done deal in a matter of seconds. .... So, this is a very powerful data structure.

**CW: How does automation fit in with the digital thread and your software?**

ABB: I would say the industry today, and certainly the leaders, understand that they must automate and they must digitize to stay competitive, to grow or to simply meet rate. .... Automation is really the only path forward. .... But nobody is buying anything because it's cool. We see some amazingly cool robotics, and I think our stuff is cool. ... We are engaged with our customers in a very professional, very technical, very practical discussion to evaluate the technology, to evaluate the software, to evaluate the benefits. .... It's not technology for technol-ogy, but technology for value. So, why do you auto-mate? Because, you want higher throughput, because you want better control of quality, because you want to reduce scrap.

**CW: What are some things a company can do to get on the road to higher efficiency and higher rate production?**

ABB: When someone approaches us like that, we obviously ask some more questions. What's going on? Where are your challenges? Where are your pain points? In most cases, the root cause for all of this is a production environment that grew more challenging either by complexity or by volume. And, for whatever reason, the investment did not keep up with that. And so the systems and processes are just not suitable to deal with that level of complexity or volume. .... And if you throw more people and more paper at it, it only makes things worse. .... We start by solving the most elementary need to digitize the process. How do we integrate the data? How do we automate data collection? And there we would introduce sensors, for example, we put RFID or any other sensor — could be Bluetooth — on every material, every tool, every part that moves around. Now we are working with customers on temperature sensing. What about humidity sensing? But this is a lot of data that did not exist, or existed in paperwork somewhere. .... The pain points in composites are in tracking, managing the materials — not just the raw materials but the work in progress .... As we develop a dialog, we pilot a system, and eventually deploy it. And deployments can be very quick.



Source | *CW*

## Catching up with CAMX 2017

CAMX 2017 was originally scheduled for September 2017 in Orlando, FL, US, but Hurricane Irma blew it off course and into December. The postponed show was no worse for the wear and proved, again, the dynamism of the composites industry's largest market. *CompositesWorld* was there, and you can see our reporting online in several places, including summaries from senior editors Ginger Gardiner (**short.gardnerweb.com/CAMX17GG**) and Sara Black (**short.compositesworld.com/CAMX17SB**) and editor-in-chief Jeff Sloan (**short.gardnerweb.com/CAMX17JS**). And if video is more your speed, see the show here: **short.gardnerweb.com/CAMX17V.**