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Electronics Beyond Content.

## EFFICIENCY: NOT JUST AN OPERATIONAL ISSUE

WITH JOEL SCUTCHFIELD,  
KOH YOUNG AMERICA



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## DRIVING MANUFACTURING EXCELLENCE AT INTERVALA WITH KOH YOUNG: ENHANCING PRODUCT QUALITY AND OPERATIONAL EFFICIENCY

BY BRENT FISCHTHAL,  
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KOH YOUNG AMERICA



*There has never been a time when it is more important to drive manufacturing excellence, particularly in the United States. Reshoring is creating real demand for contract electronics manufacturers like Intervala, but that demand must be met swiftly and competitively with scale and efficiency. Alongside this, unemployment is low and talent is getting harder to find, so expansion needs to occur in a way that mitigates the risk of talent shortages. Partnerships with equipment vendors who understand that their customers need to be competitive while digitally transforming and accelerating automation are highly valued.*

We took a deep dive with the team at Intervala to explore how strategic supplier relationships, when done right, can add value and enhance quality and operational excellence.

### INTERVALA IS WHERE COMPLEX PROBLEMS FIND INTELLIGENT SOLUTIONS

Intervala describes itself in concise terms. It is a full-service manufacturer, innovative problem solver and customer service champion. Intervala believes there's a solution to every problem. The company creates customized, intelligent solutions for unique, high-performance electronic and electromechanical manufacturing requirements. Customers choose and stay with Intervala because Intervala understands its customers' complex product and service needs and provides a customized experience tailored to their requirements.

Joe Benz, Intervala's Director of Operations in the Pittsburgh region, explained the importance of standing out in a crowded marketplace. "In contract manufacturing, part of the game is to differentiate yourself from the pack. Certainly, one of the ways to do that is capital equipment selection. For us, the capital equipment selection process has been pretty straightforward. Our goal is to find the best equipment in the marketplace, not the best bargain. We define that by not only the hardware and the software, but also the support."

Intervala had a long association with members of the Koh Young team, including Head of Global Marketing Brent Fischthal, and felt very comfortable it was going to get stellar support as a result. But the company also used a performance matrix to look at how Koh Young performed against the competition. Joe explained that this made the decision to invest in Koh Young's printed circuit board manufacturing equipment easy.

"It was a paradigm shift for us," said Joe. "In the past, our gear, as well as some of the gear we were evaluating, would just be two-dimensional, scanning the board,







comparing the board to other two-dimensional images we had in a library to do some comparison between whether the same or different. We were very limited in our ability to actually identify nonconformances and, therefore, very limited in our ability to improve our manufacturing processes.”

**STELLAR QUALITY AND STELLAR PERFORMANCE**

When Joe looked at Koh Young, he saw the value of the “enormous amount of information” it can provide. “It was obvious that the equipment would allow us to provide a very good product to our internal customers and, in turn, to our external customers – while also alerting us in real time as to where we can improve the process for any reason,” said Joe.

He was right. “The performance of the production lines is stellar, and I tell prospective customers and existing customers that,” said Joe. “The lines are performing at a level that a lot of OEMs would be envious of. We’re real-time dispositioning so we know immediately whether the line is performing at a satisfactory level or not. If it’s not, we make adjustments. We’re measuring performance via DPMO, or defects per million opportunities, and our termination DPMO is approaching Six Sigma. Our placement DPMO is not that far behind. So, when you consider that we don’t have any design authority and a lot of times we’re working to process out design issues, those numbers are just absolutely incredible.”

**CONTINUOUS IMPROVEMENT AND FASTER NEW PRODUCT INTRODUCTION (NPI)**

As Intervala Process Engineer Chris St. Mars explained, “Koh Young has really changed the game for us as far as ease of launching new



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products for our customers and continually improving the existing product. The tools are powerful. We use K-Smart every day to monitor in real time and historically. We go through defects and form corrective action plans based off the information that the Koh Young equipment provides.

“The time to launch boards into production is reduced with this equipment. It allows me to make quick edits on the fly without bringing the whole production line to a halt. I’m able to improve the inspection criteria while we’re live running the boards down the line.”



Process Engineer Jonathan Hoffman likes that the software is easy to use and that engineers don't have to spend a lot of time setting it up. "The main thing is getting the program out to the floor so we can run production," added Jonathan. "The programming of the AOI machine is super quick and easy. When Koh Young came to set this machine up, the field service engineer said we could generate a program in less than five minutes, and he was right. I can make a program in two or three minutes. It's simple to program and very repeatable."

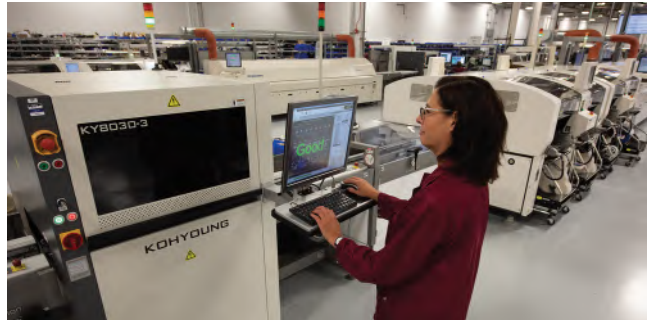
Intervala serializes all boards so if there is an issue with something all the data for every board is there and the team can look back and see what the machine picked up on. The machine is going to find the issues.

"The print process is one of the most important processes in surface mount, so we want to catch the defects or any issues right here at this machine before it goes downstream," explained Jonathan. "Without this very critical piece of equipment, we would have to do inspection visually and that's just not reliable. You need a machine that you can depend on to find those types of issues. It raises our quality level probably 20-fold."

**REAL-TIME FACTUAL FEEDBACK AND EASE OF USE**

"The greatest impact from the Koh Young equipment is the daily and weekly feedback our operators receive in real time," added Joe. "It's allowed those operators to understand that if they set up the printer in a certain way, they're going to potentially have some print defects. The feedback is real-time, same with our pick-and-place operators, so they're able to make adjustments on the gear and improve those processes instantly."

"The easier the gear is to use and interpret, the lower the skill level required," he said. "So, in a challenging time like this, where it's very difficult to hire people and it's even more difficult to bring people up to speed to a subject matter expert level, having gear that is easy to interpret and easy to use is vitally important to our success."



**REAL FRIENDS SHOW UP WHEN YOU NEED THEM**

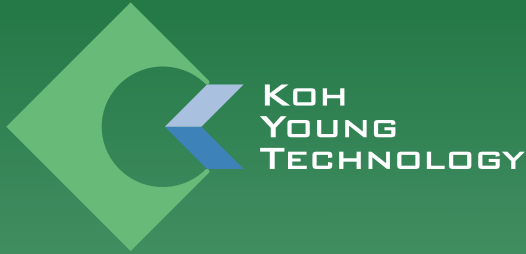
Koh Young has always been renowned for service. "For example, depending on the nature of an issue, the Koh Young team can just port into the machine and troubleshoot from wherever they are," said Joe. "And if the issue is something more significant, they'll come on site. I know this for a fact because, a few years back, we had a catastrophic event right on the Christmas holiday that required us to get out of our old location and into a new location in very short order. I called up Brent and I said here's the situation, 'I'm in dire need of support'. Within a week I had technical people on site making sure that we were basically restarting the gear. Brent responded exactly as I would expect him to respond."

Joe concluded saying, "We feel like Koh Young is a partner. They're not just an equipment supplier to us and we're going to lean on them as much as we possibly can."

Interested in more? You can watch the video case study accompanying this piece at <https://youtu.be/ww97Nlgo5cw>. Additionally, you can also see an in-depth interview with Intervala CEO, Teresa Huber, at [https://youtu.be/VljS5\\_asC\\_k?si=WwRQuglqXD5ED5Xux](https://youtu.be/VljS5_asC_k?si=WwRQuglqXD5ED5Xux), or listen to the podcast by searching "EMS@C-Level".

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# REVOLUTIONIZING PROCESS IMPROVEMENT

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