

"RFR is now not only back on stable ground, but is actually expanding. In moving forward we have increased our profits, increased our customer base, and increased our orders. It's been gangbusters. It's making us more competitive. We're bringing more to the bottom line now." Beverly Williams, Quality Manager

STAGGERING RESULTS FROM SIX SIGMA

ABOUT. RFR Metal Fabrication, Inc. (formerly Advanced Fabrication Technology) is a contract manufacturer of precision metal fabrication and assemblies for the Electronics, Computer and Telecommunications Industries. Based in Oxford, NC, the company employs 30 people.

THE CHALLENGE. Situations that seem at first glance like disasters, can sometimes turn out to be opportunities in disguise. That's exactly what RFR Metal Fabrication discovered when a valued customer came to them with a big problem. One of their biggest customers came to them with a program that identified its worst suppliers; ones that needed the most improvement. RFR was on the list. The customer audited RFR, and then handed down a mandate for the company to get its quality under control. If RFR failed, it would no longer be able to expect any new business from the customer. RFR supplies OEMS with metal frames and enclosures. Large data centers operated by Amazon, Google, or Facebook, may have their servers enclosed in RFR products. The company was aware that it was having problems with quality and on-time delivery, but it didn't know just how bad those problems had become. RFR's Quality Manager identified shipping as a big problem area for the company. Orders frequently contained errors, and were often packaged carelessly and getting damaged in transit. Owing to the high rate of returns, customers weren't meeting their own production goals, and RFR was incurring the return shipping costs from the incorrect and damaged products. The company's quality manager knew that she had to get tools in place to address the problems in the facility.

MEP'S ROLE. Ultimately, RFR decided to enroll two employees in the Lean Six Sigma training offered by NC State Industry Expansion Solutions, a partner of the North Carolina Manufacturing Extension Partnership (NIST MEP affiliate). RFR's quality manager was one of the two attendees. She was at first intimidated by the curriculum, but found that the training was accessible to all levels of experience. It was presented in such a way that everyone who was there came away with a strong understanding of all the tools. The two RFR employees came away from the class with a working knowledge of how to find root causes and solve them as effectively and efficiently as possible, and immediately began to implement and share the tools within their company. The results were immediate and dramatic. Within six months, the parts-per-million defect rate plummeted, while the on-time delivery rate climbed. The company was able to salvage its brittle relationships and keep its customers.



RESULTS



Defect rate dropped from **20,000** to 600 ppm



On-time delivery rate climbed to **97%** from 50%



Approval rating of most dissatisfied customer spiked to **97%** from 40%



Turnaround yielded **\$950,000** in economic impact

NEXT STEPS



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