

ENHANCING MANUFACTURING OPERATIONAL EFFICIENCY WITH GENEDGE - ELECTRONIC DESIGN AND MANUFACTURING

ABOUT ELECTRONIC DESIGN & MANUFACTURING (EDM). For more than 30 years, Electronic Design and Manufacturing (EDM) of Lynchburg, Virginia, has been solving engineering and manufacturing challenges in the electronic manufacturing services (EMS) industry. The company stands out by integrating engineering expertise and assembly resources, allowing seamless collaboration with customers during design, and providing custom solutions for existing products. The company provides engineering support, supply chain management, prototypes, SMT assembly, through-hole assembly, box build, and final assembly. As a 100% employee-owned company EDM's commitment to quality and responsiveness is driven by its employee owners.

THE CHALLENGE. In the face of fierce global competition, EDM sought to enhance its customer responsiveness, reduce lead times, ensure on-time delivery, and improve product quality, all while reducing costs and boosting productivity. Recognizing the need for a strategic shift, EDM partnered with GENEDGE, part of the MEP National Network™, to implement lean manufacturing principles through a specialized lean workflow and line balance training event tailored specifically for EDM.

MEP CENTER'S ROLE. GENEDGE provided a comprehensive training program to EDM's assembly team offering them practical, hands-on tools and techniques to streamline processes, eliminate waste, and optimize productivity. The team learned to improve efficiency, reduce cycle times, and balance workloads across final assembly, leading to a smoother, more predictable workflow. The team also studied value stream mapping and Deming's plan-do-check-act (PDCA) cycle.

As a result of the workshop, EDM saw significant improvements across several key performance indicators. Efficiency was markedly increased as bottlenecks were reduced, and unnecessary steps were eliminated. Productivity increased with an optimized line balance, leading to faster cycle times and higher output. Costs were reduced by minimizing waste and improving resource utilization, while standardized work procedures enhanced product quality, reducing defects and rework rates.

The team began by mapping the existing workflow and employed the PDCA method to identify and prioritize improvements with the highest potential impact. Initially, a single operator could produce between 32-40 pieces per hour at lower volumes. By transitioning to a one-piece flow model, three operators managed to produce 120-140 pieces per hour collectively. This significant boost in throughput met the customer's demand for nearly four times the original volume. Higher quality products are being delivered on time and are leading to an increase in customer satisfaction and loyalty. The company's newfound flexibility allowed them to respond to changes in customer demand quickly and efficiently, securing their competitive edge in the marketplace.

RESULTS



45 jobs retained



10 jobs created



\$12,000,000 in new sales

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"GENEDGE's lean workflow and line balance training have been transformative for our operations. The hands-on, practical approach enabled our team to see immediate improvements in efficiency, productivity, and quality. We're now better equipped to meet customer demands and stay competitive in a challenging market. This training has truly empowered our employees and fostered a culture of continuous improvement."

-Mike Stanley, Manufacturing Manager at EDM