

## CONSTRUCTING A BETTER TOMORROW BY STREAMLINING PRODUCTION

**ABOUT DUDERSTADT STAKES.** Duderstadt Stake is a small, family-owned manufacturing company that provides quality wooden stakes for construction, surveying, and garden use. After returning from WWII, Wilmer Duderstadt opened a retail surveying store in San Antonio, drawing on optics skills developed during the war. He later opened the stake-making operation in the 1960s on his ranch property outside Elmendorf, TX. Today, Duderstadt Stake's crew of about 20 focuses on quality wooden stakes that won't break or splinter when used to mark out sites in preparation for construction projects. They provide both standard and non-standard-sized stakes to better fit the work site and project type.

**THE CHALLENGE.** Over the years, Duderstadt Stake traditionally worked in batches. Although successful, Duderstadt realized that to remain competitive, practices needed to be updated. In batch processing, excess inventory often leads to significant waste as large quantities of products pile up between production stages, creating unnecessary movement and transportation. This accumulation complicated material handling, as workers navigated around excess stock, and resulted in delays, increased labor costs, and longer lead times. Together, these inefficiencies hindered overall productivity and responsiveness to customer demands, ultimately impacting the facility's bottom line.

**MEP CENTER'S ROLE.** To address operational challenges and inefficiencies, the management team at Duderstadt, with the expertise and guidance of TMAC (Texas Manufacturing Assistance Center), decided to implement a one-piece flow system. The goal was to streamline production, reduce waste, and enhance product quality by eliminating delays and inefficiencies inherent in the batch system. The decision to shift to a continuous flow model was driven by the need for greater flexibility and responsiveness in an increasingly competitive market. The transition to one-piece flow began with a comprehensive assessment of the existing workflow. The management team and the TMAC consultant conducted a thorough analysis of the factory's production process, carefully mapping each step. This analysis helped the team identify bottlenecks.

**"Working with TMAC has been one of the most beneficial business actions we have ever taken. With Sandra's support and guidance, we were able to take a process that took 3-4 days down to less than 8 hours to produce the same results. We couldn't ask for better partners in Leaning our processes and elevating our business."**

-Tonia Carlson-Harris, People and Organization Development

## RESULTS



Over **400%** increase in production efficiency



Over **25%** reduction in work in progress inventory



More engaged and motivated workforce



Faster response to customer demand

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