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Tool Shop Optimization

Delivery, quality and cost are the top three challenges facing tooling companies, according to a recent survey. A closer look into the causes helps to identify solutions to eliminate or minimize these pains.

More than 50 percent of tool shops polled in the survey indicated that their first priority is to implement advanced technology. And a tool shop has recently invested a significant amount of money to purchase additional machines for the purpose of expediting delivery times. Another tool shop that had trouble meeting delivery times began outsourcing their design work. While the outsourcing increased their cost, the need for greater communication between parties negated any improvement in delivery times.

Through the analysis it was revealed from tool shop executives that many investments in technology failed to deliver the expected results; hence, itâ€™s clear that tool shops need more than better technology; they need someone to help them improve business processes to optimize the tool shop.

1. **Implement 3-D design and manufacturing**

Striving toward concurrent processes, implementation of 3-D data minimizes downtime and eliminates the level of redundancy caused by caused by manually entering data into the machines, as is the case with 2-D design work.

2. **Identify the best process and flow**

All too often, companies invest in new technology or software, but oftentimes this merely moves bottlenecks from one area to another or creates other burdens in translation, as seen in the case study sidebar. The first step is to establish a streamlined process that covers all deliverables and milestonesâ€”from the initial price quote to the finished product. Inputs and outputs for each step in the process must be clearly identified, along with quality expectations and the value added to the finished product.

3. **Streamline internal and external communications**

Direct data transfer with the customer and among the design team, shop floor and purchasing not only saves time by minimizing the need for multiple data translations, it also increases data reliability, reduces errors and repeat work and minimizes engineering changes. To get started, minimize the use of printed documents, with the eventual goal of

operating as a paperless company.

4. **Re-examine outsourcing**

Including your outsourced activities in your process design may reveal opportunities to bring work back in-house and reduce costs, eliminate communication obstacles, and speed up delivery times in order to be more competitive. If certain activities must be outsourced focus on improving the communication process with these partners and better integrating them into the overall process.

5. **Implementation**

A solid implementation plan is the key to the success of the entire process. The implementation plan should consider all factors and constraints and include a contingency plan for unplanned events such as fluctuations in the shopâ€™s workload. To shield customers from any negative impact during the implementation, maintaining and even improving delivery times throughout the transition should be a priority.

The optimization plan results in a more streamlined operational approach, usually with fewer steps in the toolmaking process. Resistance to change is natural, so getting all parties involved in the process early on is crucial to its success. The cost of change must also be acknowledged and quantified: What will be the loss of productivity during the initial implementation? When is it gained back? At what point does productivity surpass previous levels through the optimization?

Measuring success is an important part of the optimization process. Using this approach, enabled tool shops to achieve tangible and measurable results, with more than a 30 percent increase in productivity and up to a 50 percent design cost reduction.

Vendor Information