

# Collaboration in the stamping industry

## More than a buzz word

By Mark Rasmussen, from *Stamping Journal*<sup>®</sup>, October, 2005  
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What is the best way to determine the optimum combination of application, design, and costs? An effective collaborative process makes the difference. Teamwork and open communication throughout the process — from prototyping to production — ensure the best design and most efficient manufacturing process, which can save millions of dollars in large projects.

This scenario is familiar to many metal stamping manufacturers: The customer's new product, designed to be an entry-level model, is struggling even before it enters the market. Tooling is completed, but costs have spiraled out of control, and the projected profit margins look unattainable.

It would be easy for the customer to demand across-the-board cost reductions from the stamper and the many other OEMs involved. Instead, the customer asks all of the vendors to attend a Saturday morning meeting on short notice. Everyone expects a day filled with tense pricing discussions.

This time, however, the outcome is much different. Instead of haggling over already thin pricing margins, all of the engineering teams gather and go back to the drawing board. Working together, they revisit product designs and look for improvements and cost savings.

Hidden parts remain functional but lose some aesthetic value. Designs are changed to match each part's application, dimension, and configuration precisely. Simple changes—such as switching to metric bolts throughout the product—save more than \$30 per unit.

The results? In one day the customer has saved hundreds of thousands of dollars in tooling and manufacturing costs. The "wow" factor in some designs undoubtedly have been reduced, but the benefits to the bottom line are clear. Collaboration often is a buzz word in the industry, but as this case demonstrates, it truly can make all the difference.



### Why Collaboration?

For hundreds of metal stampers, opportunities for collaboration are limited. Many are second- or third-tier suppliers with little leverage to influence designs or improve manufacturing efficiencies. They focus on making a customer's design come to life, and spec changes usually are unwelcome. Customer service, relationship building, and referrals ensure continued business.

For others, custom die and manufacturing processes are a lifeblood and niche. They excel at reviewing the customer's designs, looking for efficiencies and cost savings whenever possible. Some parts are highly visible and require a streamlined, visually appealing look. But when a part's function is the top priority, it must not be overdesigned, unnecessarily complicated, or difficult to manufacture.

Computer-based design systems save time but sometimes lead to overly complex designs. In certain instances, paying more for higher tolerances may be worthwhile. In others, it's a needless expense when more simple parts will meet fit and function requirements.

So what is the best way to determine the optimal combination of application, design, and costs? An effective collaborative process. Teamwork and open communication throughout the process—from prototyping to production—ensure the best design and most efficient manufacturing process, which can save millions of dollars on large projects. Without question, the cost benefits of collaboration far outweigh the common request simply to shave costs after the part has been designed.

## Defining Collaboration

Collaboration is defined differently throughout the industry. For some companies, it's little more than a fancy term. What are the characteristics of a truly collaborative customer relationship?

**Considering Design Alternatives Willingly.** Engineering teams have well-earned pride in their work. However, most designs can be improved through collaboration. If a customer's engineering team is convinced it has the best possible design, or it feels threatened by design suggestions, collaboration is destined to fail. **Collaboration must be viewed as a healthy process that benefits everyone involved. It requires cooperation, discovery, and openness to new and better ideas.**

In turn, the manufacturer must recognize a customer's potential fears and ensure the collaboration process remains constructive, professional, and focused on the product's greater good. Without these considerations, collaboration can easily deteriorate into turf wars, personality conflicts, and broken customer relationships.

**Cutting Costs Through Design Improvements.** Technology has continually improved manufacturing processes and reduced costs. The price of raw materials and transportation can greatly affect profit margins. **But the biggest potential for cost savings is through improving the part's design. The key is strategically matching the design with the dimensions, tolerances, and configurations of the material. The choice of material also is critical.**

Early in the process, manufacturers should gauge the potential for cost savings through design improvements. If the customer is skeptical, manufacturers should communicate their success stories through case studies, customer testimonials, and effective presentations.

When the prospects for collaboration are limited, the stamper should quickly change course. New manufacturing technologies, quick delivery, and strong customer service are possibilities for offering value to set the manufacturer apart from the competition.

An example of cutting costs through design improvements is a customer who has concerns about tooling prices for a particular product. When the engineering teams from both companies meet to consider design changes, they identify several changes, such as paint drain holes and bent brackets, that will reduce the process from five hits to three hits, thus lowering the manufacturing costs by more than 60 percent. Such a simple yet effective change can occur only by collaboration.

**Sharing Information and Knowledge Openly.** Within many companies, today's competitive environment leads to intense secrecy during product research and development phases. Information often is shared with employees on a "need-to-know" basis, and vendors sometimes are left out of the loop completely. Although these concerns are justifiable, they stifle collaboration.

As illustrated in the opening example, information and knowledge sharing can make the difference between success and failure. In too many cases, however, customers share information only after significant time, effort, and expense have been exhausted. Manufacturers should abide by strict confidentiality agreements, build relationships, and work with the customer's information-sharing policies to open the necessary sources.

Once customers experience the benefits of collaboration, they usually are far more willing to share information in the future. As an industry, stampers must remain committed to high ethical standards and ensure this trust is never taken for granted.

One of the most common complaints about suppliers is their lack of communication. It's another basic factor that's often overlooked. Without question, manufacturers must share communication responsibilities throughout the collaborative process and take the lead whenever necessary. Continual status updates, clear deliverables, and established time frames help create positive relationships and successful projects.

**Overcoming "Parts Are Commodities" Perceptions.** Purchasing departments and accounting departments are skilled at identifying the best possible price for goods and services. As they review options and negotiate with multiple vendors, the products or services become viewed as commodities that are largely identical or interchangeable.

Some fabricated parts do reach true commodity status—their purpose is well-defined, the design is proven, and price is the most significant factor. Instead, customer service, turnaround time, and previous relationships factor heavily in the purchasing decision for fabricated products.

For new or custom designs, collaboration almost always leads to better parts and pricing. But many purchasing professionals are unwilling to consider design alternatives or work with their internal engineering teams. Their reluctance is understandable, since changing specifications can be time-consuming, bureaucratic, and a hassle. As relationships are built and success stories are created, these perceptions often are changed. Ultimately, it falls on the industry to deliver on its promises consistently and collaboratively create effective, cost-efficient designs.

Customers who ask for "ballpark" pricing also contribute to the commodity perception. Without defined requirements, business rules, and material expectations, ballpark pricing remains risky and often inaccurate.

As an industry, manufacturers can work together to help customers understand the risks and pitfalls of ballpark pricing. Consistently requesting product specifications and details before quoting a job will lead to more accurate pricing and fewer frustrations later in the process.

**Recognizing Opportunities and Threats From International Competition.** The increasingly global economy has led to new threats from international competition. The U.S. will never be able to match the labor cost savings created by manufacturers in countries such as China.

The potential for U.S. manufacturers to outsource hand finishing and labor is significant. At the same time, many international competitors must run large batch quantities, so they can't react as quickly to changing trends in the market.

While manufacturers should always remain mindful of international competitors, they also need to recognize their own strengths—value through collaboration, just-in-time shipping options, rapid response to changing customer needs and conditions, competitive pricing, and a strong work ethic.

## **Maximizing Tools, People, and Technology**

Today's technological advances, quality standards, efficient prototyping, and advanced machining processes give manufacturers powerful solutions to offer customers. Unless these solutions are used to their full potential, however, they have limited value.

Through collaboration during the design phase, designers and engineers can explore options, processes, and tools that may not have been previously available. Customers receive the best possible parts, costs are reduced, manufacturers leverage their physical and human resources, and success stories are created. Collaboration involves hard work, receptive customers, and relationship building, but the value it creates makes the process worthwhile—and more profitable for everyone involved.