

# **Five Steps to Minimizing Costs in Your Supply Chain**

*From a Supplier's Prospective*



**Compliments of Heartland Enterprises, Ltd.  
1039 Kerr Road, Fredricksburg, TX 78624**

***Phone: (830) 997-9434  
Fax: (830) 997-9894  
Heartlandenterprises.com***



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There are many aspects to the true “cost” of the parts you buy. Some are easily measured. Others can be hidden in rework, extra freight costs, late delivery, or the cost of lost business due to undetected poor quality.

If you are concerned about the quality of the parts you receive, on time delivery, competitive prices, developing an ongoing partnership with your supplier, and excellent customer service, you are likely interested in minimizing all of the cost in your supply chain. These five steps will help you accomplish this with your suppliers:

- Be certain that the machining supplier you select has the capabilities to machine your parts efficiently, uses a disciplined system to insure quality, and has a history of on-time delivery.
- Provide the right kind of information in your requests for quotes (RFQ's) to allow your potential supplier to prepare an accurate quote.
- Allow an ample amount of time for your first order, or prototype, to be completed, and be prepared to provide the support necessary to yield the desired result.
- Communicate openly and regularly with your machining supplier.
- Be open to suggested changes concerning non-critical requirements.

In the following paragraphs, each step is explained in more detail so that the task of developing a partnering relationship is both easy and productive.



- **Be certain that the machining supplier you select has the capabilities to machine your parts efficiently, uses a disciplined system to insure quality, and has a history of on-time delivery.**

There are substantial costs associated with changing the supplier of a part, including the company's purchasing time, quality department time, and the potential for problems associated with a new supplier. This cost is small if a long-term relationship develops with a capable, quality oriented supplier. However, the cost escalates if you choose the wrong supplier because you failed to take the time to insure that your requirements and the supplier's capabilities match.

A supplier can provide a low quote, but if he does not have the equipment or the manufacturing systems to efficiently produce the part he will be forced later to increase the price, or to take short cuts which compromise quality.

Poor quality can lead to missed delivery dates due to the time it takes to either remake the part or re-work the part. An escaping defect from a supplier can also compromise your quality and cause you and/or your customers to incur additional costs. The rule of 10 recognized by leading manufacturers states that a \$100 defective part which escapes a supplier, will cost you \$1000, and if it escapes your quality control it will cost your customer \$10,000.

There are times when a supplier may lack the proper equipment to efficiently make your parts, but will knowingly quote a project at less than his normal markup with the expectation that if the relationship develops, the appropriate equipment to produce your parts efficiently will be acquired. But before you make your supplier selection, you need to be aware of situations like this, and feel confident at the outset that your supplier is committed and has the resources to acquire any equipment that he lacks.

The quality of the supplier's equipment is also critical to his ability to produce quality parts in an efficient manner. Old equipment, poorly maintained equipment, or cheap equipment, which cannot maintain tolerances will inevitably break down during the machining process leading to poor quality parts and late deliveries. A reputable supplier will provide you with an up-to-date equipment list so that you can make your own evaluation.



A quality oriented manufacturing facility will be clean, organized efficiently, have standardized processes, and a robust quality system to insure that manufacturing processes yield a result that meets or exceeds your expectations. A review of the supplier's website, quality manual, and responses from a supplier quality questionnaire, will provide the information that you need to develop confidence in the supplier's capabilities. On-site audits and 1<sup>st</sup> article inspections can further increase your confidence. A reputable supplier will welcome your request for a visit and plant tour.

Any new supplier you select should be committed to continuous improvement. Technology is constantly changing. A supplier that is not continually improving will be less efficient over time, which inevitably leads to higher costs for you. Inquire of your potential supplier what he is doing or has recently done to improve his operation.

Any new supplier you select must be financially strong in order to withstand adverse market conditions. Financial weakness will lead to inappropriate cost cutting, which may compromise the quality of your parts, or your parts supply may be interrupted by your supplier's financial failure. A report from Dunn and Bradstreet is worth the expense.

- **When you request a quote, provide annual volume expectations and detailed production information your supplier or potential supplier needs to develop an accurate quote.**

This information should include detailed, readable drawings, preferably in PDF or DXF format; supporting documents such as forging or casting drawings as well as any relevant material or process specifications. When forgings or castings are involved, it is also very helpful to have a sample part available to enable your supplier to better understand the necessary fixturing that is required. You should also tell your supplier about any manufacturing processes that you have developed to facilitate a good result, especially if the part is complex.

Quotes or responses to RFQs, are often simply educated guesses. The more educated the guesses used in forming the quote "cost" model, the firmer the finished quote will be. Uncertainty creates risk, which will be priced into a supplier's quote. Thus, by

eliminating as much uncertainty as possible, the supplier can produce a quote that is fair and accurate: which usually means less expensive.

Providing a potential supplier with annual volume information is especially important if expensive fixturing or tooling is required. The supplier will need to figure this expense in to the final costs. Annual volume information will allow the supplier to more accurately estimate the cost per part machined; uncertainty regarding annual volume drives up the price due to the greater risk associated with recouping this cost. In order to get a clear long term cost estimate, customers often will pay for the fixturing up front, which eliminates all fixturing and tooling risk from the supplier. A supplier who is unsure of the potential for repeat orders, will either no quote an RFQ or quote high to take care of the fixturing costs.



**Do not rush the first order to a new supplier, especially prototypes, and provide the necessary support to insure success.**

Your first order with a new supplier is the opportunity to develop your expectations. It is also the time to allow your supplier to work out the production process. A communications link should be opened between your quality department and your supplier's to review critical issues, including the "critical to quality" (CTQ) dimensions. Ideally, a "first article" should be requested to insure there is no misunderstanding regarding the part characteristics. Clear specifications regarding marking, packaging, and shipping should be reviewed if they are not in the Purchase Order. Poor communications, especially under rushed circumstances, can set the developing relationship on the wrong track leading to disappointment and unnecessary additional costs.

**Develop a sound communication process with your supplier.**

Poor communications can lead to missed orders, quality problems, and a lack of supplier capacity when it is needed. Your purchasing department should provide sufficient information to the supplier's customer service department to insure your needs are met and to provide added insurance that errors will not be made. This should include a copy of the latest revision of drawings for parts ordered and this revision number should be identified in your Purchase Order. It should also include summaries of parts on order, and forecasts of future needs when available. You should also try to stay with standard lead times as much as possible as this will free up the ability of the supplier to accommodate short lead time parts which you may need, without unduly impacting their manufacturing

process. Whenever the normal supplier processes are rushed, you are increasing the potential for errors which impacts part quality and on time deliveries.

**Be open to suggested changes in non-critical requirements.**

Expecting suppliers to meet rigid requirements when they are not required for the performance of the part will drive up machining costs and your prices. Also, the relative costs of various materials change over time, which can create opportunities for significant savings if you are flexible and open to changes that won't negatively impact quality. Remember, often the best suggestions for quality improvements come from the people doing the work. Take advantage of the knowledge and experience your supplier's machinists have acquired by giving their suggestions the appropriate consideration.

**These cost saving tips are provided by Heartland Enterprises, 1039 Kerr Road, Fredricksburg, Texas, 78624. Please visit our website, or give us a call:**

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