8 Contract Manufacturing Pitfalls to Avoid

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Selecting the best contract manufacturing partner can be a tricky process, especially for start-ups or companies new to the process. Since significant cost savings can be realized from working with a quality service provider, it is important for OEMs to identify key areas to make the process more efficient. This article outlines eight criteria to use during selection proceedings.

Contract Manufacturing—the outsourcing of design and production to a third party—has long been a competitive strategy for reducing time to market and simplifying project oversight in the electronics industry. Today, many decision makers are choosing to outsource greater portions of subassembly and device production. Determining how well a contract manufacturer handles complex build is essential in avoiding hidden costs and delivering a device to market as scheduled.

1. On the job accidents and turnover can have a pronounced effect on the overall cost, quality, and timely completion of any manufacturing and design project. Protecting your project against these worker injuries and worker turnover related costs is vital. Select a contract manufacturer whose production methodology and culture emphasizes safety and hazard elimination. Strong partners will measure safety, provide their scorecards [a visual tool for key performance indicators as defined by an organization; Sparton [1] ties this back to its Sparton Production System], and offer relating details. A plant audit confirms an orderly, safe, and efficient operation.

2. Project delays have a cascading effect that equals a loss of potential sales. Every

day a project is delayed, chances increase of missing the optimal sales window. Quality issues may arise due to an accelerated production pace in order to meet delivery expectations. To eliminate costly delays, it is essential to look for a contract manufacturer that not only respects and meets deadlines, but also demonstrates an excellent record of on-time delivery. Potential contract manufacturing partners will produce these delivery-related performance metrics.

3. Outdated inventory and material management production systems emphasizing the mass acquisition of large inventories result in bulk purchasing of raw material and components. Excess materials, stored on-site, generate an additional cost most contract manufacturers build into their final price. Greater cost is also realized if demand of the finished product drops; the vendor is stuck with worthless and costly component materials and incomplete units. Contract manufacturers utilizing these outdated systems will pad the project cost to diminish their risk. Partnering with a contract manufacturer with lean manufacturing inventories and materials management systems and steps for marketing forecast will eliminate these costs for OEMs and start-ups.

4. Another non-lean technique is batch manufacturing. Batch manufacturing increases risk of error spreading throughout an entire production lot. An error at any point along the manufacturing line or work station will go unnoticed, ruining an entire batch of units and forcing them to be reworked or scrapped. This, in turn, raises project costs and causes delivery delays. Lean manufacturing principles have built-in processes and mechanisms for shutting down equipment the instant a problem occurs, thus preventing its replication throughout the lot. Contract manufacturers also incorporating supplier grades and measurements further guard against the proliferation of defects.

5. When consistent quality is not delivered by a contract manufacturer, units must be reworked or scrapped, causing delays and loss of sales. If defective units find their way to end customers, a company’s reputation is questioned. These costs and delays are avoided with a contract manufacturer who stresses quality as part of their culture. Rigorous quality metrics should be built into the CM’s production process and available for review.

6. The level of quality, speed, and service often vary from one location to the next (especially locations in “low-cost” countries), creating the need to aggregate projects at certain plants. In doing this, they are cheating their partners of important productivity efficiencies. For example, not being able to use the nearest production facility adds transportation and logistical costs. Differences in reporting systems create project management headaches and loss of time. A vendor with a standardized, across-the-board production process simplifies the project oversight, increases time efficiency, and reduces costs.

7. New product introductions (NPI) require a clear process to prevent missteps and costly errors. Effort must be invested initially in fully understanding and articulating the desired characteristics and requirements of the finished unit. It is essential that logical review milestones are set throughout the prototyping and manufacturing process. A contract manufacturer with a rigorous production system eliminates these NPI missteps.

8. Lack of supply chain experience and knowledge increases the end product price when lower cost materials are not utilized. Many opportunities arise to substitute parts without compromising performance and quality. In-house experts with multiple years of supply chain management, market and demand forecasting, sophisticated reporting and industry knowledge provide an advantage throughout the life of the product.

The process matters to ensure that the complexities of a project are addressed while minimizing costs. To ensure a successful contract manufacturing partnership:

- Evaluate a potential contract manufacturer’s production methodology
- Establish utilization of lean methods and determine if a lean culture is apparent
- Request and review safety procedures
- Review metric targets and actual results versus benchmarked industry or peer standards
- Schedule a facility tour and look for clutter and disorganization
- Pose the tough questions—understand the answers

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