

A summary by Arena Solutions and Symphony Consulting



**Contract Manufacturing for Small- to Mid-Size Companies:
Summary Findings of the 2008 Arena Solutions and
Symphony Consulting Joint Study**

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Executive Summary

Contract manufacturing is a complex customer-supplier relationship linking disparate organizations and often crossing international borders. Many small and mid-size businesses (SMBs) have embraced outsourcing as a way to get ahead in an increasingly global, increasingly competitive marketplace.

This paper summarizes some of the key findings from the 2008 survey on SMBs and contract manufacturing conducted by Arena Solutions and Symphony Consulting.

The Arena Solutions and Symphony Consulting survey on contract manufacturing and SMBs finds that many companies have incurred extra—and unexpected—costs due to poor communication with their outsourcing partners. Offshoring—outsourcing beyond national borders—seems to exacerbate communication problems.

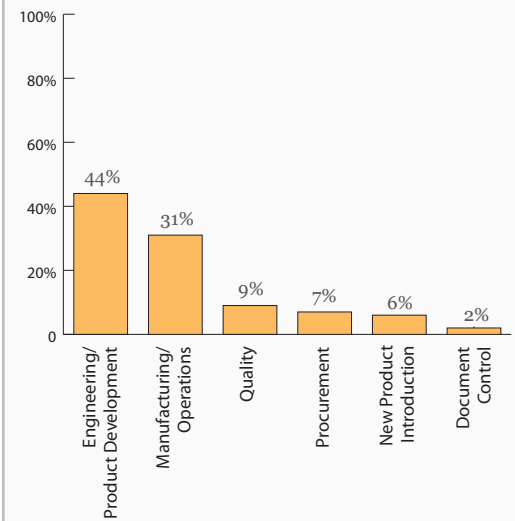
The study also reveals that many SMBs fail to establish formalized relationships with their business partners and many underestimate the cost and complexity of their outsourcing projects. Companies managing communication through manual processes such as fax or email report significant compliance and field failures, excess scrap and cost overruns attributable to communication confusion.

The study suggests that companies that blend planning, formalized relationships, and PLM (product lifecycle management) tools to maintain clear lines of communication between supply chain partners appear to have mitigated many of the risks inherent in outsourcing.

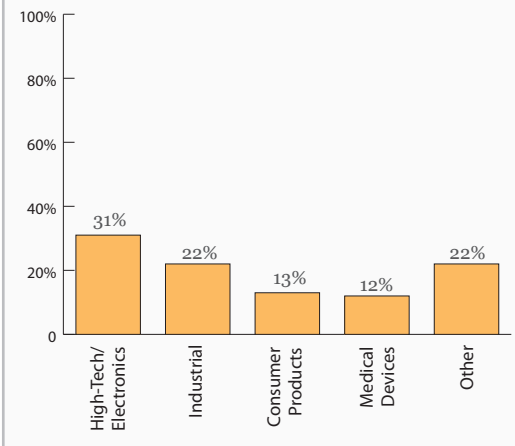
Survey Methodology and Participants

The 2008 Arena Solutions and Symphony Consulting Joint Study on Contract Manufacturing for Small- to Mid-Size Companies yielded 672 responses from companies that generate \$250 million in revenues or less. While the majority of respondents were in engineering/product development (44%) or manufacturing/operations (31%) roles, a quarter (25%) were in other functional roles, including document control, new product introduction, procurement and quality (Figure 1). Slightly more than 70% described themselves as holding director/manager or executive/vice president titles, and they came from a wide range of manufacturing industries, including high-tech/electronics (31%), industrial (22%), consumer products (13%), medical devices (12%) and more (Figure 2). Participants answered a series of questions on the challenges that small to mid-size companies encounter when they outsource their manufacturing.

**Figure 1
Respondents By Title**



**Figure 2
Respondents By Industry**



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The Role of Contract Manufacturing for SMBs

Most of the survey respondents (81%) outsource their manufacturing operations to multiple contract manufacturers (CMs). Of these, more than 90% spend less than \$20 million annually on contract manufacturing. For nearly half of these companies (48%), this expenditure represents less than 10% of their contract manufacturer’s annual revenues.

Forty-five percent (45%) of the respondents describe their outsourcing strategy as a mix of consignment (purchased parts transferred to CMs who build subassemblies or final products) and turnkey (CMs purchase all parts and build subassemblies or final products).

Of the respondents, 60% have some or all of their manufacturing done offshore. More than a quarter (29%) of respondents working with offshore CMs deem their experience as positive, while more than a third (38%) describe their experience as rocky, difficult or disastrous.

Concerning CM Contracts & Planning

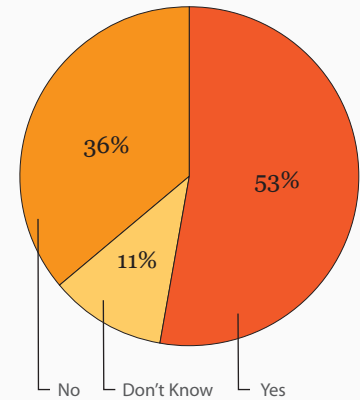
Regarding the relationship with CMs, the study found that 47% of respondents either do not have a contract in place with their CM or do not know if they have a contract (Figure 3). Forty-two percent (42%) of respondents either do not receive E&O (excess and obsolete) inventory liability information from their CMs or receive it only after a problem occurs. When asked what visibility they have into the price structure quoted by their CMs, 65% have no visibility or only limited visibility. Only 29% had complete visibility (with the pricing broken out into BOMs, markups, overhead and profit). Almost half the respondents (48%) have a hard time getting quality and defect information from their CMs, receiving it only when one of their products has been returned or when they request the information—or not receiving it at all (Figure 4).

The survey also reveals challenges in developing an accurate cost model prior to manufacturing offshore. Twenty-seven percent (27%) of respondents never developed a cost model for manufacturing offshore. While a large percentage (73%) of respondents did develop a cost model, 45% said the model did not capture all the costs they’ve seen.

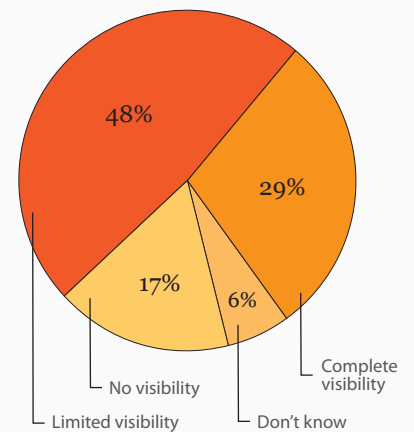
Communication Challenges & Cost Overruns

Communication is critical to a successful outsourcing relationship, but survey respondents cite poor communication among the most common challenges they face when working with outsourced manufacturing partners.

**Figure 3
Contract in Place With CM**



**Figure 4
Price Structure Visibility**



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Sixty-one percent (61%) of respondents experienced economically significant levels of field failures, with 56% of them characterizing the economic impact of these costs as high or moderate. Sixty-four percent (64%) of respondents experiencing significant field failures attributed the cause to obsolete part use, non-compliance, late communication of changes and/or a failure to communicate changes at all.

Managing Change & Compliance

Changes inevitably occur between the hand-off from OEM to CM and final production. How well those changes are shared can significantly impact a product’s success in the market. Eighty percent (80%) of survey respondents rely on manual processes like fax or email to share product changes with their CMs. For them, poorly communicated change results in a variety of negative outcomes. Sixty percent (60%) have been hit with scrap and rework costs, while 44% have experienced one or more of the following: lost revenue or market share due to missed ship dates, poor sales because of quality or compliance issues and/or the removal of products from the market due to quality or compliance issues (Figure 5).

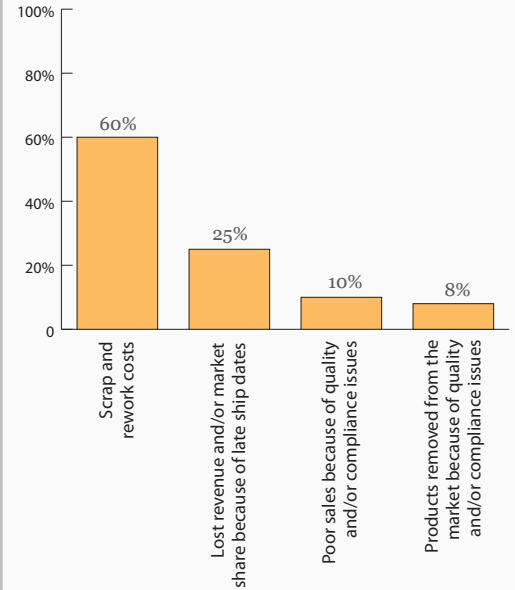
Return communication about change is a challenge too. Thirty-three percent (33%) of respondents either do not receive confirmation of product changes from their CMs or receive confirmation only upon request. For respondents who manage change processes manually with their offshore partners, 52% have experienced communication challenges that have led to scrap, rework and/or missed ship dates, and 24% have had sales hurt by quality issues.

For those respondents who do not use PLM to manage compliance information, a majority (68%) have incurred compliance-related costs. In addition, 44% experienced hard dollar costs from scrap and rework and 36% from missed ship dates (Figure 6).

In Conclusion

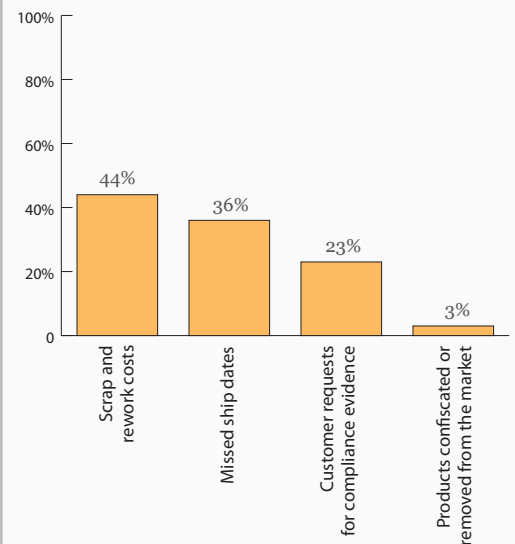
Outsourcing is an inherently complex activity, and perfection of the process is impossible. SMBs face more challenges than their larger competitors because they cannot rely on the brute force of dollars to achieve their outsourcing goals. Still, the experience of survey participants reveals a number of red flags that SMBs developing or reviewing their outsourcing strategy should take into consideration, above and beyond simply ensuring that they are working with the right contract manufacturer.

**Figure 5
Impact of Poorly Communicated Changes**



* Percentages greater than 100%, as respondents could select multiple answers.

**Figure 6
Cost of Managing Compliance Information Without PLM**



* Percentages greater than 100%, as respondents could select multiple answers.

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The survey's data revealing inaccurate cost modeling and a high percentage of business relationships lacking a formal contract suggests that a greater emphasis should be placed on due diligence and planning—before committing to a given outsourcing strategy—to ensure that there are no unpleasant surprises.

Poor communication processes seem to result in confusion as well as major cost overruns due to unresolved design changes and botched adherence to compliance requirements. The data suggests that SMBs who rely on PLM systems to track and communicate compliance data automatically incur far fewer unanticipated costs due to compliance and field failures than those who manage communication practices manually.

In short, the survey data suggests that the risk of failure for an SMB in partnership with a CM can be minimized and controlled through a more thoughtful, structured and formalized approach. In addition, implementing the proper tools can help ensure that vital manufacturing and design data is communicated to all stakeholders clearly, quickly and consistently. When it comes to SMBs and contract manufacturing, OEMs must work as smart as they work hard.

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