

A summary by Arena Solutions and Symphony Consulting



**Manufacturing Outsourcing:
Summary Findings from the June 2007
Arena Solutions/Symphony Consulting Study**

summary

Arena Solutions and Symphony Consulting conducted a study on the challenges of manufacturing outsourcing—and best practices for addressing them. This paper summarizes some of the key findings.

More than 800 individuals participated in the study, predominately senior executives and subject matter experts from a wide variety of discrete manufacturing industries, including high-tech electronics, medical device manufacturing, consumer products, aerospace and defense, automotive and industrial. Respondents included professionals from engineering (41 percent), manufacturing and procurement (36 percent) and other functional roles (23 percent). A majority were mid-market manufacturers, with more than 70 percent of all respondents working for companies that generate less than \$250M in annual revenues and operate with fewer than 1,000 employees.

Most of the respondents (85 percent) outsource part or all of their manufacturing operations. The study found that these respondents face a number of challenges when working with their contract manufacturers (CMs), including:

- Coordinating new product introduction (NPI) (65 percent)
- Managing and communicating product changes (64 percent)
- Communicating information across organizational & geographic boundaries (57 percent)

For a majority (52 percent) of study respondents, these challenges lead to hard-dollar costs associated with issues like excess inventory and unplanned rework. More effective collaboration with their CMs is seen as critically important to addressing these problems. For example, 78 percent agreed that tighter, more active participation by their CMs would reduce new product delays.

Only 32 percent of the respondents currently use a product lifecycle management (PLM) system as a shared “information infrastructure” to manage product information and share it with their CMs. These companies experience fewer outsourcing problems than companies that rely on manual processes (such as spreadsheets, email, phone, and fax) for communication of product related issues such as new product introduction, change order management and environmental compliance management. Most respondents (75 percent) who currently use manual processes recognize that improvements are needed, and state that they are “taking steps” to improve these systems.

The study showed additional advantages in using on-demand PLM software (also known as software as a service (SaaS)) versus traditional client/server systems. Specifically, respondents who use on-demand Arena PLM encountered significantly fewer outsourcing problems in the following areas than those using traditional client/server PLM :

- NPI (32 percent fewer problems)
- Environmental regulatory compliance (29 percent fewer problems)
- Product change management (26 percent fewer problems)

As a result, Arena PLM users experience 40 percent fewer hard-dollar incidents related to excess inventory and unplanned rework.

The study also reveals some of the specific challenges that respondents face when managing these processes in an outsourced manufacturing environment.

The top three challenges when managing NPI with CMs are: 1) design and manufacturability problems; 2) parts sourcing issues (such as the inclusion of obsolete, hard-to-get or long-lead parts in the AML); and 3) prototype or pilot build errors resulting from the CM and/or OEM not working with identical, complete and/or accurate product documentation.

The top problems when trying to manage environmental regulatory compliance in conjunction with outsourced manufacturing partners are: 1) the procurement of non-compliant parts; 2) the accuracy of compliant AMLs/AVLs; and 3) not having complete compliance information and/or the ability to report on compliance information.

The top three challenges when managing product change in the context of outsourced manufacturing are: 1) lack of a formal process for obtaining feedback from CMs; 2) manual, time-consuming processes around product and change documentation; and 3) changes being made without understanding their full cost impact.

In conclusion, this study provides key insight into common manufacturing outsourcing challenges faced by mid-sized OEMs. A significant finding is that most OEMs are not using a PLM system to manage product communications with their CMs. However, these companies recognize that closer involvement with their CMs would improve product-related processes, and many are currently evaluating or implementing systems to improve their performance. Companies that use PLM as a common infrastructure for sharing product information with their CMs experience fewer outsourcing issues, with users of on-demand PLM experiencing significant advantages over those using client/server PLM.

CORPORATE CONTACT

Arena Solutions

4100 East Third Avenue
Suite 300
Foster City, CA 94404
P. 650.513.3500
F. 650.513.3511
E. sales@arenasolutions.com

Symphony Consulting, Inc.

PO Box 61478
Sunnyvale, CA 94088-1478
P. 650.968.1930
E. info@symphonyconsult.com