

OEMs Becoming EMS Providers: Can it Work?

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Transitioning from an OEM to EMS focus is a brave move in the current economy. Avoid common pitfalls and follow recommended strategies.

In recent years, at least 10 North American, original equipment manufacturers (OEMs), with excess manufacturing capacity, decided to incorporate an electronics manufacturing services (EMS) business division. Their goal was to increase return on assets through manufacturing other companies' products in addition to their own. Yet, after a few years in a dual role, most of these companies divested their facilities to EMS providers or simply discontinued operations.

For many OEMs, the strategy to become an EMS provider became a detour on the track leading to outsource manufacturing. Since then, a more common strategy for OEMs, with large manufacturing capacity, has been to sell selected facilities directly to EMS providers—the EMS company could then manage and build not only the OEM's products, but also products of other OEM customers. Hewlett Packard (HP, Palo Alto, CA) is an excellent example of an OEM whose management chose to outsource first and skip the become-an-EMS strategy. HP sold several facilities to Celestica and other large EMS providers.

Overall, has the strategy of OEMs becoming EMS providers worked well? For some companies the answer has been "yes." IBM's (White Plains, NY) Toronto facility emerged as the beginnings of Celestica, which is now one of the largest five EMS providers globally. But, for most OEMs, the answer is "no," as approximately 70 percent fail at the transition.

Common Transition Pitfalls

By observing past processes and outcomes of the transitions from OEM to EMS provider, several pitfalls for the OEM were identified:

- Failing to realistically examine core competency, which, in many cases, is design, marketing and distribution channels—not printed circuit board (PCB) assembly and systems build. If some of these companies had conducted such an examination, management would have concluded that outsourcing, instead of becoming an

EMS provider, would have been more profitable.

- External customers feared, sometimes with reason, that when the OEM's own business picked up, the external customers' production runs would become a second priority.
- Management teams were primarily operations management and not versed in marketing the service. These groups did not get the internal support and budget needed to market and sell new services.
- External customers were sometimes turned off by the OEM's exaggerated sense of manufacturing prowess—perhaps developed over the years by being the single manufacturing solution for the OEM.
- The OEMs' cost structure was too high to compete in the thin-margin EMS business. At times, OEM management didn't realize the disparity—when calculating internal manufacturing costs, management would omit areas of overhead, inter-departmental reliance, program management costs and marketing and selling expenses.
- To protect intellectual property from these quasi- or full-blown competitors, external customers were reticent to send products to the OEM.
- Before serving external customers, some OEMs did not examine the varied information technologies needed to interface with numerous customers. Service and responsiveness suffered as a result of lacking real-time communication and coordination with customers.
- Internal customers (divisions of the OEM worldwide) were sometimes not aware of the new EMS division's existence—a missed opportunity for supporting the EMS division, both internally and externally, through publicity.
- OEMs lacked understanding of the need to quickly and accurately manage the quote process. Responses to prospective customers' requests for quotes (RFQs) took six to eight weeks instead of the one- or two-week time-frame that is competitive in the EMS world.

- The cultural differences between being an OEM and an EMS provider were often not understood or taken into consideration, resulting in lack of responsiveness to the needs of multiple customers and reduced customer satisfaction.
- Changes in business processes were not understood—an OEM's forecasting processes and inventory management practices are different from those required for an effective EMS business.
- If the OEM reached outside its own industry category to serve a wider range of customers, that OEM often found itself outside its core competency. If the OEM stuck to its own industry category, the OEM found itself competing with customers and having too narrow a niche to weather industry-specific economic downturns over time.
- Many OEMs underestimated the investment required to become a full-service provider. Today's successful EMS providers have invested in design tools, new product introduction (NPI) process management, collaboration software, new manufacturing technologies, supply-chain management tools and specialized equipment for product inspection and testing.
- Many OEMs did not appreciate competitive strategies for outsourcing and, as a result, were not competitive with existing EMS providers.
- Some OEMs failed to understand the extent to which they had to increase the level of communications required to effectively manage relationships with multiple OEM customers.
- EMS providers spend a large amount of time developing program-management processes and personnel. OEMs who failed to understand the importance of program management did not provide a competitive level of service to their customers.
- Many OEM performance measures are different from how an EMS company must measure its performance. OEMs switching to an EMS model should understand customer performance expectations and how to manage them effectively.

Successful, Long-Lasting EMS Businesses

David Jones, marketing and sales manager at Siemens Electronics Manufacturing Center (Johnson City, TN), illustrates how an OEM-turned-EMS provider has survived and done well for multiple decades. His facility has been part of an OEM doing EMS work since opening in 1973, as part of Texas Instruments (TI, Dallas, TX).

"From the beginning, we have focused on manufacturing as a core competency—regardless of the customer segment served [internal or external]," says Jones. "This philosophy carried over from TI to Siemens during a 1991 acquisition of this facility. Our focus has always been the medium- to low-volume, high-mix, high-technical-complexity market niche. Both parent companies recognized the value of a strong manufacturing competency and encouraged the operation to continually improve and expand this competency by serving internal and external customers equally."

Jones attributes Siemens' success in the EMS market to three consistent operating philosophies and practices: 1) thinking and operating strictly as an EMS provider—not as an OEM or EMS

provider within an OEM; 2) focusing on the medium- to low-volume, high-mix, high-technical-complexity market niche; and 3) serving internal and external customers differently

Jones comments that, "As an OEM doing EMS, we have noticed a common fear among potential external customers that our parent company could at some point require all of our manufacturing capacity and 'kick out' external customers. This has never happened in 28 years because it is not part of the operating philosophy of the parent companies." In fact, he points to the fairly common practice for large, stand-alone EMS providers to disengage smaller customers when the EMS provider's revenues increase.

Recommended Strategies

The following suggestions have helped many companies successfully turn OEM businesses into EMS companies with staying power:

- Investigate the outsourcing landscape. Conduct market research, interview other companies and join industry organizations to network with other industry leaders. Understand the outsourcing trends, players and requirements for becoming a successful EMS provider.
- Start developing marketing/strategic plans. Conduct a strengths, weaknesses, opportunities and threats (SWOT) analysis and learn about value-added positioning. Conduct both competitor and customer analysis. Look to expand service offerings in the value chain through different means. Seek strategic alliances with other service providers in non-core-competency areas, and use these alliances to expand or gain competitive advantages, such as technology leverage, purchasing leverage, parts sourcing, customer contacts and expansion into other global regions. Look to acquire service offerings through mergers and acquisitions.
- Understand the competitive pricing for offered services through independent benchmarking.
- Be forewarned of the relatively low profit margins achieved in the EMS world. Does this financial ratio fit the corporation's goals?
- Become familiar with the sales approaches used by EMS providers. In comparison with successful sales techniques used by OEMs, the EMS approach can be far more strategic and targeted toward the senior level of customer management.
- Effectively advertise/promote offered services. The most effective techniques are different from those employed by OEMs.
- Understand the business processes used by EMS providers: customer quotation; design collaboration; design-for-X initiatives; NPI management; enterprise resource planning (ERP) systems; lean manufacturing practices; Six-Sigma quality programs; inventory management programs; product and technology transfer; and program management.
- Learn which tools EMS providers must have to be competitive: mechanical design; electrical design; software simulation tools; test-development design; information technology (IT) infrastructure; failure analysis; and statistical process control (SPC) programs.
- Understand the organizational development requirements associated with the metamorphosis from an OEM to EMS provider.

Personnel training for new processes—customer-supplier collaboration, program management and cultural changes—is vital for the EMS to succeed.

- Consider the necessary facilities and equipment upgrades required to be competitive [ball-grid arrays (BGAs), chip on board and other advanced attachment processes—mechanical assembly, system testing and integration].
- Prepare to obtain new quality and regulatory certifications based on customer requirements, such as ISO 9001:2000, ISO 14001, MDD, FDA and TUV.
- Develop an objective customer-satisfaction process, through a third party, to obtain the most honest and strategic responses.
- If your facilities are not yet located in low-cost regions, such as Eastern Europe, China or Central America, consider ways to compete effectively on more cost-sensitive product lines.
- Develop internal performance metrics that support customer performance expectations appropriate to the EMS industry.

Going Beyond Expertise and Culture

To become a successful EMS provider and serve customers across many industrial segments, an OEM must go beyond technical expertise. But, in addition to technical breadth, the OEM also must extend service offerings, building core competency around wide-ranging new services—instead of relying only on what the OEM has perfected for internal customers.

Do not underestimate the cultural shift, while transitioning from having one “boss” (the OEM company) to serving dozens of different customers. An appropriate question for management is, “Are you willing and prepared to make the cultural shift needed to manage the expanded bandwidth and new territory?” Along with cultural changes to facilitate communications between the new EMS operations, the OEM should understand that initial IT investments will cost 1 to 1.5 percent of sales.¹

Conclusion

OEM management teams should be cautioned to seriously evaluate the urge to become an EMS provider and go straight to outsourcing. OEMs determined to mold their company into a successful, long-term EMS provider, should learn from the common mistakes made in the past and consider industry recommended strategies. ■

Reference

1. Technology Forecasters, Inc. Quarterly Forum for Electronics Manufacturing Outsourcing and Supply Chain, First Quarter 2002 report.

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