



MANAGEMENT

Sizing Up Supply Chain Partnerships

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Electronic manufacturing companies faced with production needs often look to electronic manufacturing services (EMS) suppliers for help. But when a company decides to “outsource” their production to one of these EMS partners, is there a way for them to determine the value of their supply chain EMS partnerships? Perhaps the following “checklist” can help them better understand the value of their electronic manufacturing partnerships.

Materials Management is one key EMS function where the value of a good manufacturing partner becomes apparent well before the product reaches the production floor. Managing the many electronic components and assemblies needed for production requires a capable team of materials management and purchasing professionals. They should be able to provide the best supply-chain purchasing value, while maintaining the integrity of the parts by avoiding counterfeits, maintaining proper schedules for parts deliveries, and dealing with obsolescence when necessary. While advanced technology can be impressive, it is a manufacturing partner’s procedures, materials requirement planning (MRP) systems, experience, and documented performance metrics that are critical to the supply chain and on-time delivery.

Production Technology and Human Resources are measures of a potential manufacturing partner’s capabilities to cost-effectively manufacture a product. When evaluating a manufacturing resource, it is important to look at the experience of the key staff, factory engineering personnel, and management team. Any EMS partner should bring repeatable results, and this comes about from experienced and knowledgeable personnel and not just advanced technology. Evaluating a potential partner’s key metrics, such as on-time delivery and quality (customer acceptance rates) can reveal if a factory pro-

vides the technology and experience to produce a given set of products repeatedly and cost-effectively.

Quality is an important aspect of any EMS partner, and a potential partner should have a proven quality program. That program should include monitoring and reporting key metrics such as customer returns (acceptance rates), and detailed tracking on key areas like workmanship problems, defective components, and process-related issues.

Other considerations for quality are how an EMS supplier interfaces with suppliers and how they track the quality and integrity of their own component sources and suppliers. A potential partner should view quality as part of a profit center, since fewer defective products from the supply chain and fewer end-customer returns mean lower hidden costs that are attributed to the supply chain.

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Long-Term Commitment to the Client is as much a requirement for an EMS partner as it is for the manufacturer. A successful manufacturing partner will try to understand a client’s business and needs beyond just booking and shipping orders. Building long-term relationships can enable a

manufacturer to optimize supply-chain value (lower costs), investing in special equipment, if needed, to optimize the supply chain and reduce the costs of manufacturing a client's products. Strong EMS supply-chain partners can offer different "value-added" scenarios to a client to help enhance assembly productivity and reduce manufacturing costs.

Commitment to Long-Term Value can help a manufacturer choose a partner that will help control the real costs of production. Companies seeking manufacturing partners can too often focus on just the costs shown on a purchase order (PO) to the factory, rather than looking at the costs of all manufacturing-related activities.

Of course, the costs of the PO to the factory — including material, labor, overhead, and profit — are important, but real costs should be attached to other areas that can affect "product cost." For example, if a product is built in Asia, there are the added costs of transportation, logistics, and travel. A complete supply-chain cost model must include direct and indirect costs when understanding the value of a supply chain (manufacturing) program.

In-House or Outsourced?

Inevitably when evaluating supply-chain options, a question may arise whether it is better to turn to outsourced manufacturing or to build an in-house manufacturing program. The choice usually depends on whether a firm's direction is in being a product company or a manufacturing company. A company that chooses the former usually has a product that is truly unique and unlike other products. Often, a

significant investment by the company has gone into the development of the product. When it is time for that product to enter the production stage, it is necessary to maintain quality cost-effectively and in large volumes, and the decision must be made on the best way to do that: in-house manufacturing or outsourced EMS assistance.

A company may have taken years in research and development to design a product. An EMS partner, on the other hand, is focused only on manufacturing, and evaluates the product in terms of how to build it the best way in large numbers. An EMS partner brings a great deal of experience in volume production, engineering, and quality assurance and can apply this knowledge and experience to the volume production of a product.

ABX Engineering, Inc. strives to bring value and quality to its supply-chain EMS partnerships. By practicing proper materials management, and maintaining long-term product qualities, the firm has been able to serve its customers for more than 26 years, offering full turnkey manufacturing, from quick-turn NPI, through volume turnkey manufacturing and electro-mechanical assembly. ABX is an NAISC/CCR/IAE classified small business, ISO 13485-2003 and ISO 9001-2008 certified, ITAR registered, with fully trained staff to IPC 610 Class II & Class III and J-STD-001, with Certified Trainers on staff. The company has over 65,000 square feet of manufacturing space in its Burlingame, CA facility with a sales/support office in San Diego, CA.

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