The Case for Distribution:
How Electronic Component Distributors
Have Staved Off Competitive Threats
to Remain Vital to the Supply Chain

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Evolving business models. Globalization. Advances in technology. All these changes have challenged the way electronic component distributors do business. With each change, however, distributors have had an opportunity to prove their agility by reinventing themselves and maintaining their positions as key players in the supply chain. In fact, new threats emerge fairly regularly, only to be mitigated by the strengths of distribution's value propositions.

Historically, distributors purchased standard products, in volume, directly from manufacturers, then resold those products in small quantities to a wide variety of customers – customers who needed a source from which they could procure leading edge technology products from manufacturers. Distributors - then and now - serve as the extended sales force for component manufacturers. Most large manufacturers may only call on the market makers or top global customers – maybe 100 companies. The distribution channel has access to the tier 2 and tier 3 account bases, which expands the market for the manufacturers. So distributors created value by increasing sales for suppliers and covering a larger customer base than a supplier's sales force could handle efficiently. And by taking on small- to medium-sized customers, offering local representation, flexible deliveries, small quantity sales and customer support, the distributor became a strategic channel to market. Distributors kept inventory as well, to help prevent lost sales due to supplier lead-time lags.

Value-added activities became a differentiator among electronic components distributors, as they introduced services such as connector assembly, cable assembly, kitting, semiconductor programming and technical support. Most distributors operated locally, then regionally and nationally, growing their businesses organically and through acquisition.

During the '90s, distributors continued to provide both traditional and value-added services. Suppliers recognized that distribution helped them gain competitive advantage through effective marketing, third-party advertising and product support. For example, distributors not only sold products, but managed inventories, administered customer accounts, extended credit to start-up customers, provided telephone- and field-sales support, and supplied literature and technical material − all aimed at increasing market share for their suppliers. The hidden agenda: Make sure suppliers perceived distribution services as indispensable.

Today, business models typically have many different points of contact. Design and engineering may take place in Texas, for example. Where the product gets consumed can be in Europe. Who actually procures the product may be from an entirely different company, like a contract manufacturer. And the product might be incorporated into a manufacturing process in China. The challenges of coordination are many and complex. A global distributor can track the processes from design to production.

Helping trading partners accelerate growth and realize cost efficiencies

Using distribution is a cost-effective way to go to market. In fact, a 2003 Texas A&M University study of distribution presented at a recent National Electronic Distributors Association (NEDA) conference shows that suppliers save money by using the distribution channel, regardless of whether they have a small or large percentage of channel sales. Savings are derived through

- reduced cost of sales
- reduced costs and reduced risk associated with holding inventory
- the value associated with extended credit terms offered by distributors.

These saving add up. According to the above-mentioned distribution study, a semiconductor company using a broad line distributor can save as much as 64 percent of its total cost of sales by using distribution to go to market.

Customers, too, can save by purchasing through distribution. Distributors' core competencies include supply-chain management, which includes inventory management, bill of materials management, warehousing, and tracking of products toward obsolescence – with a full understanding of − and desire to eliminate − the costs of shutting a production line down due to missing parts. Further, distributors carry the burden of planning, purchasing, receiving and inspecting components under stringent quality controls. Customers can save up to 63.4 percent of sales buying through an authorized distributor.

Distributors:

- Cost effectively market technology products from the world's leading suppliers to the engineering departments at original equipment manufacturer (OEM) customers
- Provide the most efficient sales and marketing channel for reaching most customers
- Are the most efficient logistics providers to the mass market
- Are the most efficient managers of standard inventory
- Offer comprehensive design-chain and supply-chain solutions to accelerate growth and reduce costs for customers and suppliers
- If globally positioned, have a global transfer process and global infrastructure to facilitate migration, as manufacturing shifts from one region to another, and back again
- Have the most accurate picture of marketplace demand in real time, given the high volume of transactions they handle, coupled with large numbers of customers
- Help customers and suppliers manage inventory risk
- Are the most efficient providers of financial support for inventory asset management

- Have the intellectual capital/relationships with customers and suppliers, built by experience and a history in the industry

Each type of distributor offers value to suppliers and customers. For broad line distributors, the biggest value is their ability to be a one-stop shop. They can aggregate demand on a worldwide scale, while providing technical design, engineering services, financing and lines of credit; saving the customer costs and getting products to market quickly. Component distributors offer several programs that keep them vital to the supply chain, including such services as just-in-time delivery; point of use replenishment services that keep a steady stream of inventory coming into the pipeline; in-plant stores, design-in services, demand creation, and a host of services around component usage, availability and lead-time projections.

The size and scope of those companies sets them apart from the vast majority of distribution companies.

For example, an *EE Times* magazine study on distribution shows that engineers increasingly rely on distributors as sources of technical knowledge and education, for their applications expertise, and for tactical information – component prices, lead-times and availability – during the design process. Design engineers employed by distributors have been most successful in working with engineering departments at the OEM customers during detailed design and prototype stages.

EE Times notes that in the design chain, distributors are called on for reference designs, hardware evaluation and development kits, and intellectual property (IP) cores. Semiconductor distribution specialist Avnet Cilicon, for example, brings a holistic sales approach to customers by exposing all the relative and new technology and sharing its knowledge of what components work best in various applications. Analysts say those kinds of services could pay off in the very near future, it the economic recovery jumps into high gear. Distribution companies that focus on demand creation have laid the groundwork for success in the upturn. Despite a lack of production, they have continued to design in components – and once some of those designs make it into production, those companies will reap the benefits.

Catalog distributors, unlike the broad line giants, are used for purchasing prototype quantities of parts, and as a source to double-check on component availability. Specialty or niche distributors are seen as technical experts. They are tapped for their in-depth product knowledge and for design assistance.

Each type of distributor has continued to evolve and transform its business model in the face of myriad challenges, helping them all stay firmly rooted in the industry. By staying on top of changes in technology and responding to ever-changing market conditions, distribution continues to be a force in spite of challenges that, during the last decade alone, have included the rise in prominence of the contract manufacturer, the advent of the Internet and online-only companies and the third-party logistics providers (3PLs), known also as the worldwide shipping companies.

Several years ago, some industry stakeholders were concerned that the large contract manufacturers would merely buy directly from suppliers, eliminating distributors from the equation. That didn't happen. Big contract manufacturers gain their market share from former OEM direct business, a different market than distribution's. While distribution generally focuses on the small- and medium-sized customers, the largest contract manufacturers focus on Tier 1 players - -the Ciscos, HPs and other large OEMs. Contract manufacturers and distributors coexist peacefully and have both gained in market share, thanks to the shrinking amount of business going directly from the supplier to the OEM customer base.

And further, contract manufacturers – some 1,050 in North America are customers of Avnet's alone – are among distribution's fastest growing customer base.

And indeed, distributors were not disintermediated by the Internet, but have leveraged their capabilities with the functionality of the Internet to create even better services. In fact, the dot-com bubble burst a few years ago and along with it the notion that a 'virtual' provider could manage the complex physical flow of goods and money for thousands of customers in the electronics supply chain.

As to the 3PLs, their core competency lies in efficiently moving boxes around the world. However, they are not set up to open those boxes to break down orders into smaller quantities, perform physical value-added services such as chip programming, or to combine components from several manufacturers to create an assembled kit for the customer. Those jobs are best carried out by distributors whose facilities and processes are quality-rated and designed to accommodate these specialized services.

Distributors as Supply Chain Managers

Further, distribution has seen a migration of its own value, beginning with picking and packing products from off the shelf, to offering value-added services, to providing solutions. Because distributors serve both the supply-side and demand-side of the market, they have insight into the marketplace that is more comprehensive than other players' views.

Recognizing this, customers are empowering their distributors to play the role of supply chain manager. For example, Inrange Technologies Corp., Lumberton, N.J., uses Avnet as its main supply-chain partner. Avnet helps its engineers design products, serves as the liaison with the local manufacturer's representatives and maintains an on-site store that moves components onto the production line on a just-in-time basis. Inrange shares its manufacturing resource planning (MRPs) weekly with Avnet, to help plan the inventory pipeline. The companies hold quarterly reviews of both the joint business plan and the actual supply chain itself to make sure product turns are meeting goals. Inrange cites several advantages to this relationship, including flexibility and cost control.

In a survey by *Supply Chain Management Review,* three out of four respondents said that their company CEO considered supply-chain management to be a source of competitive advantage.

The severe 3-year industry downturn of late 2000 through 2003 forced electronics companies to revamp the way they manage their own supply chains. In particular, there is a closer scrutiny of available data and demand forecasts. Instead of blind belief in a forecast – especially when there's an up tick in demand – there's a closer examination of the information. And, as keepers of the most supply-chain data, distributors have a huge opportunity to capitalize on this chain of events, because they are better prepared than other players to assess and respond to changes in demand.

Before rushing into production, companies now take a much harder look at what's really going on. For example, Alcatel is ready for recovery, but has its feet firmly planted on the ground. Though demand visibility is poor, the company has planned its components sourcing for several scenarios, including a sudden upward spike in demand. But the company now tempers its high hopes with hard facts. Before placing a purchase order, there's a much closer alignment between the sales and planning staffs. On a weekly basis, the company reviews customer opportunities in order to track inventory and make decisions on how much stock to inventory. And though Alcatel might have plans in place in anticipation of order volumes suddenly doubling or tripling in size, its management won't make purchase commitments without thinking it through.

Compare that approach to the generally accepted procedures of just four years ago when many OEMs never questioned their own forecasts as they pushed their trading partners to produce as much as they could.

Future Looks Bright, With Some Challenges

Going forward, *EE Times* predicts demands on technical distributors will increase. On the vendor side, distributors will be used as the technical information vehicle to market. On the customer side, they will be a time-to-market enabler.

Economic data from sources such as iSuppli, Gartner, the Semiconductor Industry Association and Electronic Outlook indicate that the semiconductor industry is expected to grow anywhere from 24 percent to 37 percent this year. Distribution's total available market (DTAM) as a percentage of the overall total available market (TAM) is rising in the Americas region − increasing the relative importance of distribution as an effective channel to market. In fact, industry leaders argue that distribution is likely to have a bigger role than ever.

However, distributors must continue to look for ways to add value – and show that they are the most efficient providers.

Distributors must:

- Continue to improve operating efficiencies to solidify their role in the technology supply chain – And for public companies, this is what Wall Street wants to see evidence of.
- Leverage proprietary data. It's the Information Age and the distribution channel possesses much of the supply-chain information.
- Remember the lessons learned from the 2000-2003 downturn, particularly the massive inventory glut. Continue to question the veracity of customers' forecasts – no one wants to repeat the write-offs of 2001-2002.

Because distribution is a mature industry, it will, by definition, face profit margin pressure and continued consolidation. To succeed in this environment, companies must offer operational excellence, using the lowest cost business processes at the highest possible quality, provide superior customer service levels – and all of this must be done while improving returns on capital to satisfy current and future investors. Distributors must make sure they are providing value to customers, and charging appropriately for that value. Many companies are doing these things already, which underscores that distribution continues to be a vital link in the supply chain.

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