

PROCUREMENT MANAGEMENT

in the Electrical Contracting Industry

Supply Chain Horizontal Integration (SCHI): An alternative, low-cost approach to supply-chain management

THE ELECTRICAL CONTRACTING INDUSTRY IS FACING A FORK IN THE ROAD with supply-channel management. In their historical roles, distributors play the part of a wholesale/retail combination for electrical components while hoping to be profitable through speculations (currently on steel and copper). Contractors act as their own suppliers, buying in bulk and then paying far more in labor to manage their materials. Material purchasing by the general contractor or owner does little to help the situation from either the distributor or the contractor's cost and profit perspective. An alternative model allows both the contractor and distributor to become low-cost operators of electrical services, products and installation by jointly managing the material flow in a horizontal integration supply chain.

In the historical model, consider how much time is spent between contractors and distributors negotiating a 1 or 2 percent price reduction. Ultimately, contractors and distributors are looking for the same thing: profits. Where do they go? A couple of electricians waiting for a \$2 dollar bracket can have a net cost of hundreds or thousands of dollars. A \$20 package loses its entire profit

and then some when a \$15 red-label shipping tag is attached and absorbed by the distributor. Both companies are operating at a loss. This occurs on a daily basis throughout the industry.

Construction is a complex and risky industry. Contractors and distributors have very different needs for their operations. By using the Supply Chain Horizontal Integration (SCHI) model, a

Potential Savings for Contractors in Application of SCHI Model

Annual Sales	\$10,000,000	
Material Purchase	\$3,400,000	Potential savings @ 2% = \$68,000
Labor Cost	\$4,200,000	Potential savings @ 40% = \$1,680,000

contractor and distributor form a close relationship to identify each others' needs. Participants use their own expertise to meet the needs of others by addressing nonvalue-added activities and reduce the waste-in-process. This model allows the distributors to manage the materials and distribution and contractors to focus on installation.

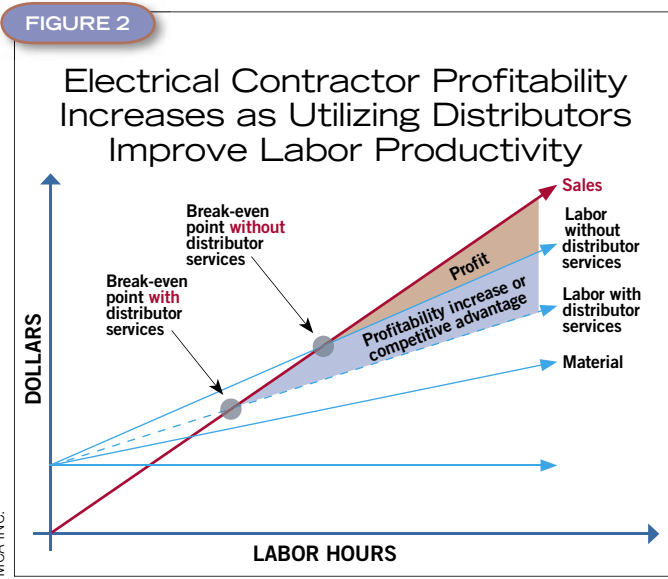
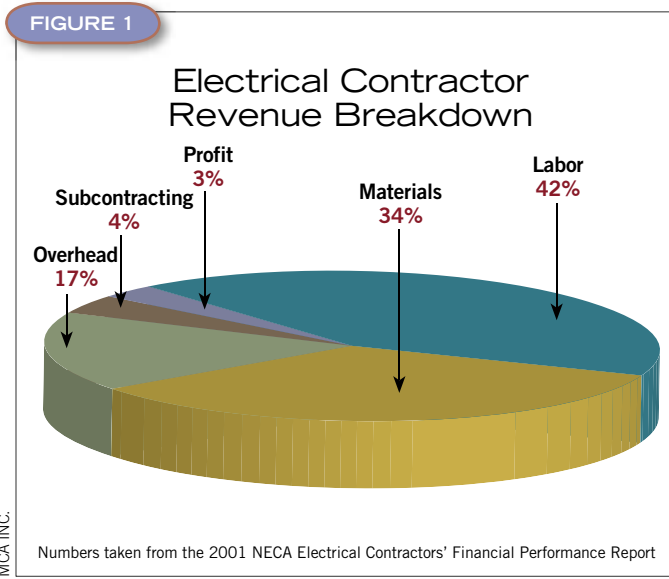
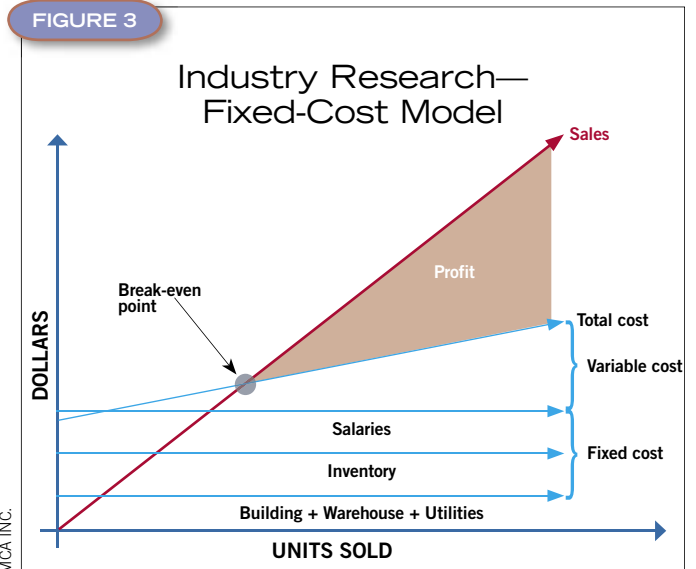
For this SCHI to work, the companies involved in the horizontal integration need to capitalize on the strengths of each other to address their own needs with an understanding that goes beyond the price and gross profits on the materials—all the way to the inherent costs. Each stakeholder in SCHI needs to appreciate how the others work and comprehend the cost drivers for their type of work.

The real opportunities occur as both partners become low-cost producers in their respective fields. These opportunities manifest through improved profitability, reduced costs and increased volume. Taking advantage of the opportunities in SCHI requires a transition from the historical "price and volume" mind-set to a "service and profit" mind-set. The distributor needs to understand its customers—how they make money and where they earn their profits—as well as understanding itself—where and how its profits are made.

According to data from the National Electrical Contractors Association (NECA), revenues—on average—are broken down as follows (see Figure 1):

- ▶ 42 percent to cost of labor
- ▶ 34 percent to cost of materials
- ▶ 4 percent to subcontracting
- ▶ 17 percent to direct job expenses
- ▶ 3 percent to profits

Within a small margin, the materials for a project are essentially fixed and at a price set by the local market. For the contractor, the biggest variable is labor; this is also the factor with the biggest



impact on a contractor's profitability. As depicted in Figure 2, every hour saved in labor on a hard-bid job can be applied directly to profits.

Research has shown that approximately 40 percent of the labor on a job goes to material handling in some form: receiving, unpacking, assembling, waiting, ordering, returning, fetching, locating. Forty of the 42 percent on every job gives a potential of almost 17 percent of the revenues that can be converted from cost of labor to bottom-line profits. To achieve this same savings on material costs would require distributors to provide a 44 percent price cut on everything.

In reality, 100 percent of the time spent on material handling cannot be recovered by the contractor. However, by using SCHI, saving 50, 25 or even 10 percent translates directly and significantly to the bottom line. In order to achieve the savings, the contractor and distributor need to work together to effectively use the resources and expertise of the distributor to address material management and distribution needs to facilitate the installation of the material (see table above for cost-saving comparison of material vs. labor).

Contractors understand that providing services adds cost to the distributor and are willing to share in the burden when it reduces their overall costs. Our recent survey for an Electrical Contracting Foundation (Electri'21) research project showed that more than

FIGURE 4

Greenlee Gang Box



MCA INC.

96 percent of contractors were willing to pay for some distributor services. The savings attained through increased productivity will substantially outweigh the direct cost of material or equipment.

Getting contractors to pay for services will require that distributors accurately quantify their organization's total costs of providing the services, as well as using the resources and expertise of the contractors to reduce the costs of providing such services.

For example, we found out in our recent research for the National Association of Electrical Distributors (NAED) that every time the electrical distributor processes a contractor's purchase order, it costs the distributor an average of \$72 to process, not including the actual material costs. That same purchase order also costs the contractor an average of \$42, and our research shows the typical contractor processes 4,000 purchase orders for every \$10 million dollars worth of sales.

Quantifying fixed-resource allocation of the distributor to individual services will allow the most accurate pricing of services. Fixed costs cannot be linearly divided across volume of material or volume of services. The cost of providing services is hidden because the resources needed to provide the services are in the fixed category (see Figure 3). Compounding the service-cost issue is the reason why many services are lumped in with material, further masking the distributor's cost of service.

For SCHI to work, the biggest help a contractor can provide is communication and planning. By moving the customer point of entry forward as far as possible, distributors can use their customer's intimate knowledge of the project to reduce their own costs. Frequent, early communication will allow a distributor the flexibility to manage its own inventory and processes to be responsive instead of reactive while substantially reducing costs.

Problems can be identified and solved before they become emergencies, further bringing costs down for both parties. When both the contractor and the distributor recognize the actual costs, and cost types involved with their services, cooperative solutions can be developed that actually improve the profitability of both organizations.

Figure 4 shows a Greenlee gang box containing the correct quantities of the correct materials delivered already stocked to a specific location on the job site, immediately prior to the beginning of the planned work. Proper planning and coordination can allow the distributor to provide this service while reducing fixed overhead cost, simultaneously reducing the contractor's direct labor material handling cost.

Contractors' procurement does not end with purchasing the needed materials. The procurement process in SCHI has six distinctive steps (see Figure 5).

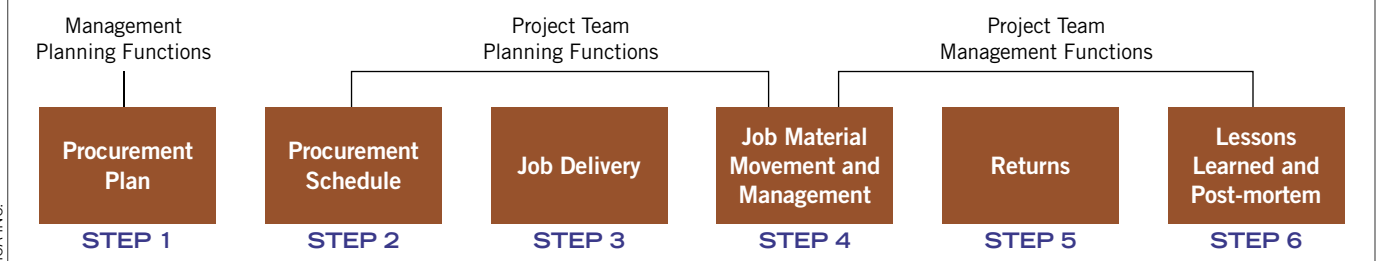
1. Procurement Plan
2. Procurement Schedule
3. Job Delivery
4. Job Material Movement and Management
5. Returns
6. Lessons Learned and Post-mortem

In the Horizontal Integration Model, the contractor and distributor work together. They share information to assist the other in the areas with the most impact on profits. In the best application, the distributor and the contractor jointly develop a Process of Procurement that allows both parties to focus on their core competencies by capitalizing on the strengths of the other. **EC**

DANESHGARI is president of MCA Inc., a consulting firm for contractors. **NIMMO** is MCA's director of operations, and **WILSON** is MCA's director of research. They can be reached at 810.232.9797.

FIGURE 5

The Process of Procurement



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