

High-Stakes Supply Management

By Jim A. Scotti

Jim A. Scotti is vice president and chief procurement officer for Fluor Corporation, Houston.

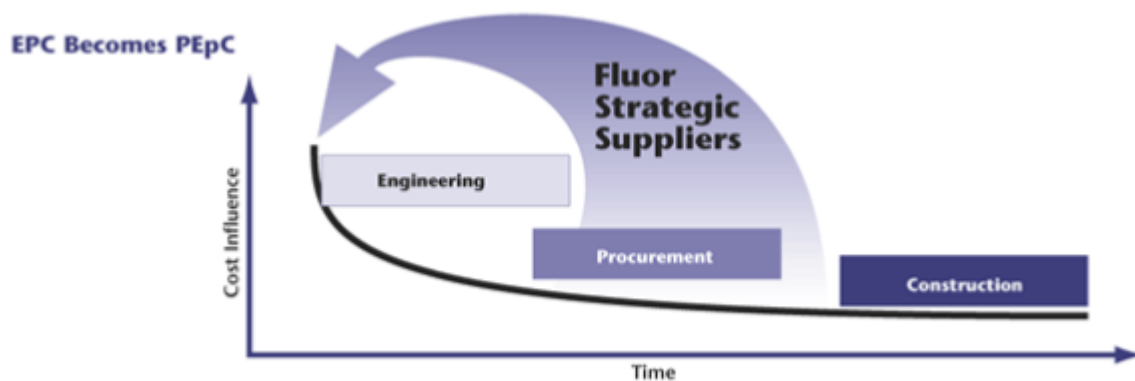
May 2005, *Inside Supply Management*[®], Vol. 16, No. 5, page 8.

Firms are emphasizing the importance of supplier integration through the procurement, engineering, procurement and construction (PEpC) process.

Procurement in the engineering, procurement and construction (EPC) industry has traditionally been about tactical purchasing — well-executed, project by project, according to rules that ensured optimum results — for one client or project at a time. Today, the role of supply management is drastically changing. Progressive EPC companies, such as Aliso Viejo, California-based Fluor Corporation, are learning that they can maximize their value to clients and create significant competitive advantage for themselves by viewing supply management far more strategically. And well they should. Nearly two-thirds of the money spent on engineering and construction projects is earmarked for supply management.

The catalyst that gives Fluor its competitive advantage on the EPC projects it bids and executes is supplier integration. One of the methods Fluor has adopted to emphasize the importance of supplier integration is the procurement, engineering, procurement and construction (PEpC) — pronounced *pepsi* — process. This process was born out of concepts and research performed in the late 1990s by the Construction Industry Institute (CII), a research organization whose members fund studies at leading universities to identify ways to improve the planning and execution of major construction projects. The name of the research project is aptly titled, *Reforming Owner, Contractor, Supplier Relationships: A Project Delivery System to Optimize Roles in EPC Projects*.

The research was carried out by a 15-person team of supply management leaders from a variety of engineering firms and major corporations. The team explored the potential for changing the traditional relationships among owners, contractors and suppliers in order to enhance the meaningful contributions of suppliers to the process. The "cost influence curve" (below), which was a product of the CII research, has been altered to show the forward movement of Fluor's strategic suppliers in the supply chain of a typical construction project.



What this curve illustrates is that although the ability to influence the cost of a project is greatest during the early design engineering (the "E") stages of a project, months go by before critical equipment and material are procured (the "P"), allowing only then for construction (the "C") to begin. The CII research revealed that awarding strategic procurement items earlier on a typical EPC project could produce price savings of 4-8 percent and dramatic savings of 10-15 percent in the time to complete the project. Therefore, as

shown below, moving the "big P," the purchase of strategic items (or in this case Fluor's "strategic suppliers"), in front of engineering and adding a "little p," the balance of items to be procured, reconfigures the traditional EPC model into PEpC.

In order to accomplish these savings, Fluor put a program in place that allows its critical supply base to work hand-in-hand with engineering during the proposal and/or design phase of a project and with construction earlier in the process than in the typical EPC model. Suppliers are encouraged to work with Fluor in this way in exchange for the opportunity to contract with the company and its clients on a preferred basis. This type of "supplier integration" is particularly critical to the capital projects business. It helps reduce engineering efforts, shorten cycle times and lessen project risk, which all relate to overall cost reduction while allowing Fluor's clients to bring product to market faster.

While the PEpC process fits the procurement of equipment and materials in the engineering and construction industry perfectly, the process is also applicable to the purchase of goods and services that most corporations engage in on a regular basis. Logistics services, such as the transportation of cargo and facilities maintenance, are among the areas where supply management has been greatly enhanced by the PEpC process. In fact, selecting and working with a single supplier earlier in the process for any type of procurement requirement provides a long-term, cost-effective way of doing business. In many cases, the traditional buyer-seller adversarial relationship is replaced by a longer-term, strategic partnership where trust and reliability become even more important than price.

While many manufacturing companies were early adapters of supplier integration when sourcing raw materials and components, few have the consistent high-volume spend and expertise in capital equipment to add this expertise and leverage to their supply chain organizations. However, just as the early procurement of raw materials positively affects the early supply chain requirements of a manufacturing company, Fluor has proven that supplier integration and standardization from a capital goods perspective is key to its business. Because of the company's multibillion-dollar spend, world-class technical and commercial market expertise, and powerful databases, Fluor believes that it's uniquely well-positioned to drive benefits to its clients and to its company.

Fluor's most senior-level management strongly endorses this new way of purchasing. At the CAPS Research 2004 Annual Executive Roundtable for chief procurement officers, Fluor CEO Alan Boeckmann, who was the keynote speaker, said: "On a typical EPC project for a new capital facility, procurement represents 60-70 percent of the cost of the project, so it's obvious where the money is. This is why procurement is a core competency at Fluor, and perhaps uniquely in our industry, we have invested to ensure its strategic role in our business. We have no intent of ever going back to the traditional way of purchasing."

"Box Page 9"

According to the Construction Industry Institute's research project, *Reforming Owner, Contractor, Supplier Relationships: A Project Delivery System to Optimize Supplier Roles in EPC Projects*, there are four steps that must be taken to implement a PEPC project delivery system.

1. Identify the project-critical components in a project prior to all but the most conceptual project engineering.
2. Consummate commercially-complete transactions to engage the most *project-favorable* suppliers of those components (according to project-specific selection criteria).
3. Facilitate the delivery of those suppliers' core competencies into the project delivery process, including the suppliers' ability to accept broader roles in project execution and risk management. This influences, defines and benefits the overall project execution strategy and the detail engineering effort.
4. Undertake the process strategically, deliberately and consistently.

To contact the author or sources mentioned in this article, please send an e-mail to author@ism.ws.