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Powering the service-oriented supply chain

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How a service-oriented supply chain can simultaneously help cut costs, and drive efficiencies while improving service levels

In the power and utilities industry, supply chain has traditionally been regarded as a necessary cost burden to power supply and delivery businesses. That's understandable, of course, since a regular flow of materials is critical to achieving the company's critical mission of "keeping the lights on."

Nonetheless, utilities have realized that an efficient supply chain network has much to contribute to the overall performance of power and utilities companies. Supply chain management leaders have long understood and practiced consolidation of warehouses to increase operating efficiencies, reduce inventories, and save costs. Trouble is, the focus has purely been on "leaning" the supply chain and few companies have defined a clear vision for the role of an effective supply chain within the larger utility operations organization.

That's changing, however, as supply chain management leaders are under pressure to manage costs, simultaneously improve service to their business unit partners, and become more proactive participants in driving business success. Additionally, the lingering economic downturn has further impacted the supply chain, resulting in complaints from business units about deteriorating service quality.

What is needed is a new focus on the supply chain "customer" – which are primarily the power supply and delivery business units – that enables the supply chain to efficiently target and deliver materials to operations.

Renewed focus on the "customer"

A focus on simultaneously creating value added services for the customer and improving overall logistics – in essence, implementing a service-oriented supply network – represents a new approach for utility supply chain management. Although a support organization to power delivery and supply business units, this renewed focus will enable supply chain to have a seat at the table in driving overall business success.

A service-oriented supply chain will require an efficient logistics infrastructure, a cost effective materials delivery model and value added differentiated material services to the customers.

The transformation will not be simple, but the potential benefits of a service-oriented supply chain are many. Chief among them: Line crew productivity in power delivery operations is improved because the supply chain efficiently delivers a complete set of materials on a timely basis. Availability of materials is reliable and accurate for planned projects or outages, and supply management can more quickly deliver materials for emergency response.

A service-oriented network results in reduced overall costs through efficient warehouse operations, an optimized material delivery model and enhanced service to the business customers. It will also lead to the consolidation of inventory at a few strategic locations across the service territory resulting in improved responsiveness.

We have seen that, when carefully planned and implemented, transformation to a service-oriented supply chain can enable power and utilities companies to achieve service levels up to 95% material readiness at all materials locations, while simultaneously achieving 10% - 20% cost savings, and close to 50% improvement in warehouse efficiency.

The three factors for success

We believe that three components are critical to fully transform utility supply chain management into a service-oriented network.

Efficient Logistics Infrastructure: Power and utilities companies can establish an efficient logistics infrastructure by creating a hub-and-spoke network, and improving warehouse productivity.

A hub-and-spoke logistics network allows consolidation of inventory at the central distribution center (the hub). The spokes (service centers or plant operations), house limited inventory and are supplied material for planned construction and maintenance jobs by the hub. Emergency inventory is positioned at the spokes and at strategic points within the service territory to enable rapid delivery of materials for quick response.

Establishing “customer” focused warehouse missions is essential to improving efficiency of the logistics network. For example, in support of power delivery operations, a customer-focused warehouse will include separate dedicated storage areas and warehouse staff for fast-moving, repetitive power delivery jobs from those for large, custom substation and transmission materials. Separating work flows based on job type improves productivity of the warehouse staff, driven by the focus on a single customer. Additional warehouse productivity gains can also be achieved by streamlining picking and receiving processes and optimizing delivery routes and scheduling.

Cost Effective Materials Delivery: Job kitting at the central distribution center is emerging as the most cost effective mode of material delivery. Materials are picked by job, “kitted” and shipped to the field. This represents a departure from the traditional practice of shipping material in bulk to the service centers, where jobs are subsequently picked and kitted by power supply or delivery personnel.

Consolidating job kitting activity at the central distribution center eliminates redundant material handling at the service centers and allows power delivery personnel to focus on planning and executing construction and maintenance work. In addition to economies of scale, consolidation also provides greater opportunity to standardize processes and improve efficiency.

Increased collaboration is required between supply management and the business customers to facilitate accurate and timely flow of work order material demand leading to improved material availability and reliability.

Value-added Differentiated Material Services: To deliver superlative service to business partners, the supply chain management team should engage the business at the point of delivery of materials.

Supply chain staff should be deployed at service centers or operating plants to assist crews in resolving issues with prompt delivery of job kits and materials, and to facilitate successful job execution. Innovative services to their business partners at every level should be designed to improve crew productivity – leading to faster deployment of energy assets or quicker recovery from an outage.

Toward a transformed supply chain

In today’s fast-changing business environment, power and utilities supply chain organizations must take a proactive role in creating process efficiencies and cost savings, while improving service to the business customers. To do so, supply chain management leaders must implement a systematic service-oriented supply chain that focuses on customer service, increased reliability, and better material availability. In addition to improving crew productivity, this supply chain, will help reduce overall operating costs, and manage inventory levels.

Rigorous self-assessment and proactive discipline will be needed to design and implement the changes to the logistics network, warehouse and business partner engagement models. It won’t be easy, but this transformation will enable the supply chain organization to become more of a strategic business partner and drive value and innovation for power and utilities companies.

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