

## **The Importance of Engineers in Supply Chain**

Generally, one might think of an engineer as wearing a hard hat (a white one) and safety glasses, somewhere in a plant or construction site, carrying a set of drawings, trying to solve challenging problems or overseeing a project. The many fields of mechanical engineering is so vast that the important or even critical roles engineers play in “less technical” environments are mostly misunderstood and overlooked. The role of engineers in supply chain and more specifically in strategic sourcing is a typical example. Supply chain offers engineers strategic roles with long term benefits to the employer opposed to the role of operations and / or maintenance engineers whose primary responsibility is to complete projects or start the plant up as soon as possible after routine maintenance.

As an engineering professional working in a design environment, awareness of engineering possibilities in supply chain was unknown. Many companies still don't realize the real consequences of strategic decisions taken (or not taken) in supply chain, including its effects on operations and vice versa. The importance of having strong engineering individuals working in supply chain to make strategic technical decisions suddenly became clear as this would form the basis to ultimately reduce total cost of ownership (TCO) and improve plant availability without operations realizing potential changes to past “modus-operandi”. Time spent in a supply chain environment highlighted important responsibilities of engineers which includes: obtaining a holistic view of e.g. mechanical goods and services within the local (and if applicable international) markets to ensure best standards and practices for procurement, establishing a common strategic direction for dealing with key suppliers and stakeholders, optimizing and standardizing procurement opportunities, management and optimization of internal approved vendors/manufacturers to ensure procurement that meets the relevant health & safety standards as well as local and/or international engineering standards and specifications. To manage this effectively, a diligent engineering thought process is required to understand the technical requirements of internal business processes. Further support in the form of broad knowledge and background of various, different engineering standards and specifications supports regular audits on suppliers to verify compliance. One often hears of procurement challenges such as the recent train locomotives that was procured to the wrong specifications. One can't then help to wonder if there were any engineering involvement in the supply chain and possible technical standardization process.

From a maintenance point of view standardizing on specific brands of equipment (e.g. pumps, valves, filters etc.) is in most cases a good approach. This in turn brings benefits such as minimum / critical spares coordination, stock holding benefits and strategies that supports plant availability. On the other hand, standardization can reduce competitiveness in the market and needs to be managed carefully, as this could make the plant vulnerable by being too reliant on one or two suppliers. A critical challenge engineers in strategic sourcing face is to find that balance between ensuring security of supply, understanding stakeholder requirements and expectations, effectively managing total cost of ownership and technical and legal compliance through correct supply chain practices and procedures.

Although the role of a engineer in supply chain might be considered as “less technical” in the mechanical engineering environment it certainly is a critical and much needed role with

responsibilities and deliverables that can achieve huge cost savings benefits for any company through transparent and diligent sourcing strategies.



Niekie Swanepoel

MSAIMechE