

Relationship of supply chain and lean in water companies report examples

[Business](#), [Management](#)



Supply chain management and lean concepts have been recognized in many industries as a significant cost reduction exercise (Smart, 2005). To define Supply Chain Management is a broader term that encompasses planning, management and execution of all activities involved in sourcing, procurement, and logistics management activities. It also includes coordination and collaboration with various partners like suppliers, intermediaries, service providers, and customers. In short supply chain management integrates supply and demand management activities within the organization.

Lean is a systematic approach to enhance the customer value by identifying and eliminating nonproductive time, effort and materials which are called “waste”, through continuous improvement (Thompson, Manrodt & Vitasek, 2014). Five lean principles are: Value (Define value from the perspective of the customer), Flow (Understand the process and clear any obstacles that don't add value), Pull (Initiate work only when requested by the customer), Responsiveness (Be able to respond to change), Perfection (Continuously refine the process to improve efficiency, cycle time, costs and quality).

Whereas Lean Manufacturing focus to reduce waste and non-value-add activities supply chain aims at reducing lead times and optimizing activities of shop floor. Supply chain in addition to applying Lean tools also leverages tools like Six Sigma, TQM, and TOC

A lean supply chain is defined as a set of organizations which are directly linked by upstream or downstream flows of products, finances, services, and information. They all work collaboratively to reduce cost and waste. It is done by pulling efficiently and effectively exactly what is needed to meet the

needs of the individual customer.

As in other industries Lean is used in water segment to improve operational optimization, facilitate energy reduction for treatment of water and wastewater, lowering the maintenance cost and increasing the treatment capacity (Bickerstaff & Brown, 2012).

There are many water-sector utilities that are using lean principles to improve their operations. Some examples include using 5S and visual controls to improve the material organization on service trucks, eliminating waste in the administrative processes like customer billing through lean events, and optimizing treatment of wastewater digester operations with the help of root-cause analysis and statistical tools.

Supply chain management is an integrating function which works on data. It facilitates

Collaboration between stakeholders. Lean and supply chain in the water industry is used by the water and sewerage companies which can be seen as much more integrated structure. Each member has a role to add value to the product through the abstraction process, storage, treatment and distribution. Whether it is a customer or private agency or business water at the end consumer's discretion needs to be in a suitable condition for consumption. The value addition value remains in the hands of everyone.

With the help of lean supply chain the ability to track and analyze the processes at the plant-level gives better insight into operations. It brings monthly financial review of key performance indicators (KPIs) related to energy consumption, chemical usage and other variables in the spotlight. It is easy to look at the components and identify how they relate to each other

and also make an assessment of how the business is going (Opssys. com, 2014). This is possible because the savings comes from operational efficiencies and by preventing non-compliance.

There are many authorities that have applied lean supply chain principles in the water industry. A change in Water Infrastructure Maintenance Trucks after Lean Improvements can be seen at the case study of JEA (Lean Six Sigma and Environment Case Study: JEA, 2011).

References

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