

Cost optimization through bi-directional supply chain

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Abstract

Pick-up operations from the vendors is unidirectional supply chain in E-commerce industry. But resources that are used travel in both directions to arrive at source point again. Similar phenomenon can be seen with delivery operations of return shipments to vendors. When one direction of the supply chain is not adding the value, cost of the shipments handled will be higher due to utilization inefficiency

This paper explains how bi-directional supply chain increases the utilization of resources, design of the bi-directional supply chain, operations of pickup center to increase utilization of infrastructure. It also emphasizes on dependencies which need focus from both forward and reverse point of view rather than solving for one direction in view. Cost, Speed and Reliability are considered for evaluation and comparison in this paper. Conclusions of the paper are made with aim at increasing the utilization of the fixed and variable resources

Keywords

Bi-directional supply chain
Marginal utilization

Biography

Udaykiran Edikoju is supply chain design specialist for Flipkart Internet Pvt. Ltd. He earned B.Tech. in Mechanical Engineering from IIT Roorkee, India and MBA from IIM Lucknow, India. Udaykiran was among top 0.5% of the people who appeared for IIT-JEE which is considered as highest level engineering entrance examination in India. He has experience in working in highly dynamic supply chain environment of companies like Flipkart and its partners. He had also worked for heavily process driven manufacturing companies like Bharat Heavy Electricals Ltd. He worked as testing engineer for Bharat Heavy Electricals Ltd., who evaluates the performance of compressors and steam turbines. Currently he is working for Flipkart as supply chain design specialist and working towards supply chain transformation of Flipkart and its logistics partners. His interests includes logistics design, manufacturing and design for six sigma.

Sarvartha Kanchan is currently working as a Director of Supply Chain Design for Flipkart India Pvt. Ltd. He earned B.Tech. in Electronics and Communication Engineering from Technical University of Uttar Pradesh, India and Masters in Operations Management from ICFAI University, India. Sarvartha has worked in supply chain environment of highly regulated / process driven manufacturing companies like GE Healthcare, Britannia Industries Limited and complex logistics and warehousing domain with Flipkart. He has worked across different supply chain functions namely, Strategic Sourcing, Vendor Development, Process Engineering & Quality, Materials Management and Order Fulfillment. He was responsible for driving efficiency improvement projects in supply chain at a corporate level and

was looking at end to end value chain for driving LEAN Six Sigma improvements. Currently he looking at transforming supply chain design to improve speed, reliability and cost for the logistics function of Flipkart. His interests include vendor development, manufacturing, simulation, optimization, design for six sigma and lean. He is member of ASQ, APICS, WERC.