

Factors influencing on optimizing the supply chain of shreddable waste for Cement Kiln Co Processing in Sri Lanka

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The candidate has carried out research for the MBA in Supply Chain Management under my supervision.

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Abstract

INSEE Ecocycle is the waste management business unit of Siam City Cement Company (Lanka) Limited and they are serving over 300 number of customers and covers every sorts of industries in the country. Their focus is on industrial waste co processing using the cement kilns at Puttalam cement factory. This waste management business integrates comprehensive supply chain management concepts on customer management, large volumes of hazardous and non hazardous waste material transport, inventory management, material handling, Millions of rupees of financial transactions, all sorts of communication channels with customers, suppliers and internal stake holders and other sustainability drivers such as safety and compliance are always prioritized in this business. On the waste co processing operation model for Ecocycle Sri Lanka, always there is a supply demand mismatch due to acceptance limitations of the co processing facility.

General reverse logistics drivers are also different on this business model. When evaluating the nature of the Supply Chain managed by the INSEE Ecocycle, gaps are visible in almost every aspect of the characteristics in which need to drive for best supply chain management practices. Optimum Supply Chain characteristics of Inventory Optimization, Rapid fulfilment, Flexibility are not visible on the INSEE Ecocycle supply chain while very limited usage of big data by the organization.

Different scenarios are disrupting the smooth operation for INSEE Ecocycle and those are known by the management. However the optimization is always been a challenge. This research aims to identify the influential factors on optimizing the textile and polythene waste supply chain optimization via internal organization aspects using internal employees at 100% response rate. Factor analysis is used to identify the variables and the analysis results suggested five factors influential to waste supply chain optimization as distribution planning, immediate next day planning, behavior of accounts in charge, organization facts, and acceptance considerations. Beyond those factors, operational team is on dilemma situations on selecting the most suitable customer to be served out of several customers who are having opposite characteristics such as large volume vs small volumes or accurate planning vs poor planning. Also different opinions among the team members for the same situations such as planned maintenance or space unavailability situations are impacting adversely on for the optimization of the waste supply chain.

Key Words

Waste Management, Co Processing, Optimization,

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List of Acronyms

SCCCL	Siam City Cement Company (Lanka) Limited
WWTP	Waste water treatment plan
ETP	Effluent Treatment Plant
PCB	Poly Chlorinated bi Phenyl
NPS	Net Promoter Score
KMO	Kaiser-Mayer-Olkin
AIC	Account In Charge
SC	Supply Chain
GAV	Gross Added Value
EBITDA	Earnings Before Interest Tax Depreciation and Amortization
CRM	Customer Relationships Management

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