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Adapting waste management practices of recycling companies to governmental policies – The case of shredder fines management in Sweden

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Stringent policy demands on increased resource efficiency in concomitance with decreasing landfill availability in Sweden are compelling the recovery and recycling (valorisation) of shredder fines. This study aims to understand the ways in which current and future policies would influence the valorisation of shredder fines and thereby, to establish how the shredding companies should adapt to the external policy environment.

An analysis of the influence of policy on the valorisation of shredder fines has been performed using system dynamics modelling. An interview based analysis on the influence of organisational aspects on adaptation was also performed. The findings from these two studies were synthesised to identify how the shredding industry should improve from an organisational perspective in adapting to the changes in external policy environment.

The current policy framework is not readily set to facilitate the recovery and recycling of fines. As valorisation of shredder fines will only get more important within the policy framework, it is

apparent that the company needs to increase its innovativeness to increase chances to recycle fines. However, the case-company needs to be studied more elaborately by collecting sufficient data for the simulation model. Particularly, time series of material flows will help to forecast the required landfill capacity and the need to find alternative applications for shredder fines more accurately.

As far as the adapting to future policy changes, the studied company demonstrate a significant room for development, especially with respect to the three organisation aspects; systems thinking, communication, and organisational structure. Employing a systems perspective would enable the recognition of the significance of fines, and thereby the internalisation of its management within the organisational structure. That would lead to the making of more coordinated efforts for its management, which is necessary in recognising market demands, and responding efficiently via better research and development.