A DSS for analyzing logistic problems in a laundry

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In this presentation we describe a Decision Support System (DSS) that has been developed for a large laundry in the Netherlands.

The laundry has a number of industrial customers such as hospitals and factories. The hospitals need clean sheets for their beds and the factories need clean overalls for their employees. The industrial customers usually have contracts with the laundry. The needed goods are owned by the laundry and rented to the customers. The laundry is responsible for the permanent availability of a sufficient stock of clean goods at the customer.

The current version of the DSS can be used to estimate the required number of overalls for a new industrial customer. Aspects taken into account comprise (i) the customer's shift system, (ii) the interchange frequency at the customer, (iii) the transportation frequency and (iv) the throughput-time in the laundry. In the presentation we will give a description of the algorithm that is used for determining the required number of overalls. The algorithm uses the assumption that the customer's shift system is cyclic.

The next version of the DSS should support the management of the laundry to make proposals for contracts with new industrial customers. Contract prices include three parts: (i) the renting price of the goods, (ii) the transportation price, and (iii) the price of maintenance and cleaning of the goods. Also other aspects, such as the length of the contract period and the quality of the overalls will be taken into account.

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