A.G. Hofman *The use of a logistic information system within the physical distribution process.*
Masters thesis, Report 93.3.LT.4091, Transport Technology, Logistic Engineering.

Encompass Europe NV provides and gives operational support to a logistic information system.
This system allows multi-modal shipment planning, booking, tracking and tracing.
Probably the use of this system will improve the physical distribution process and allow lower safety stocks.
This optional reduction of the stocks is hard to quantify. That is why Encompass would like to have a model at its disposal, that can simulate the physical distribution process of different shippers to quantify the optional advantages of the use of their information system.

A concept is made for a model, that simulates physical distribution, with traditional order methods, not using the information, offered by Encompass' information system, as well as more advanced order methods, that do use this information.
Part of this conceptual model is implemented. The resulting simulation model only simulates the use of traditional order methods either stock-controlled (order quantities are fixed and order moments depend on the level of the stock) or plan-controlled (order quantities depend on the level of the stock and order moments are fixed).
In this model, Encompass' system can be used to take advantage of the access to the schedules of different carriers, enabling more frequent transport, and to locate goods on transport, in order to reroute these goods, if desired.

Simulation with the model shows that increasing the transport frequency as well as using the re-route option improves the performance of the physical distribution process indeed, but the extent is not yet satisfactory.
The results also show that using Encompass' system without attuning the organization of the physical distribution process to the information, offered by this system, doesn't improve the performance of this process.
Order methods that do use this information should thus be implemented as well.

Reports on Logistic Engineering (in Dutch)