



Case study:

Renoflex-Gruppen A/S

RENOFLEX-GRUPPEN A/S IS A large waste management company in the Copenhagen area of Denmark. In 2005 Renoflex-Gruppen started a process of exchanging their ERP system and also introducing a system for route planning and optimisation. Transvision Waste Planner was chosen as the new system for route planning – and the results have exceeded all expectations.



RENOFLEX-GRUPPEN A/S focuses on industrial waste collection containing both industrial routes and container transportation.

30 trucks handle the industrial waste routes including collection of paper, cardboard, glass, hospital waste and industrial kitchen waste. 50 trucks, of which 20 are subcontractor trucks, handle the transportation of the full load maxi containers which mainly contain waste from building sites.

The business controller and acting transportation manager Michael Juul Hansen explains, "The reason for implementing Transvision Waste Planner was actually a little back to front. It was becoming a necessity for us to substitute our 20-year-old ERP system, but we knew that we would not make money by doing so.

New investments naturally need to have an underlying positive business case so we decided to integrate the new ERP system with a transportation planning system in the same process. A transportation planning system would affect the core of our business and we believed it would bring down our transportation costs and therefore strengthen our overall business case."

TRANSVISION WASTE PLANNER

Michael Juul Hansen continues, "The reason we chose Transvision Waste Planner is that the system is targeted at our industry and can cope with the very complex planning we undertake. A good example is our use of frequency planning based on visit patterns to each customer combined with fraction demands.

Therefore, it was important for us that the system we chose was very mature so we would avoid too many adjustments in the system or alternatively workarounds.

After our implementation we have so far only had one small part of the planning algorithm adjusted. We can now plan so we send the same truck to the same customer if the visit is on the same weekday. The rest of the planning logic has been handled by parameter settings in the system.

Behind the regular user interface the system is incredibly comprehensive and can be configured in many ways. This gives us many options when we plan, but demands a highly skilled super-user to adjust the more complex planning parameters and to advise the planners if the plans look wrong."



A very powerful planning system



"With automatic planning we improve our KPI's by 10-15 %," Business Controller Michael Juul Hansen says.

THE PLANNING PROCESS in Renoflex-Gruppen is divided into different steps. Transvision Waste Planner's tactical module is used for optimising master routes, the operational module is used for booking ad-hoc orders and the real-time module controls the execution.

Michael Juul Hansen says, "For our industrial bin routes we first create master plans in the tactical module of the system. Based on for example information about visit pattern, customer positions, quantities and capacities the system automatically optimises the plans. The quality of the plans is so good that we only need to verify the routes and make some small manual plan adjustments.

The approved plans are then transferred via the standardised interfaces to the ERP system and soon to a mobile solution also. Afterwards we continue the dynamic planning in Transvision Waste Planner's operational module where both ad hoc orders for bin collections and container movements are planned. The system can fully automatically

book and insert ad-hoc orders into the plans, finding the optimal route and sequence for us.

We are currently in the middle of implementing a mobile solution for the drivers. When this is completed, we will be in a position to control the execution through the real-time module of the system. We will also be able to perform event-driven optimisation where the system changes the plans according to urgent orders

and status information from the trucks during the day. This will be especially valuable for us in the very dynamic container business."

LARGE SAVINGS

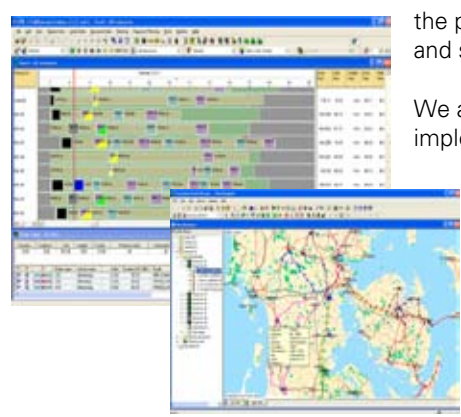
Michael Juul Hansen concludes, "Transvision Waste Planner is a very powerful planning system.

The only negative thing I can say about the system is also one of its advantages. It has so much depth to the functionality, that it is important to have a skilled super-user working with the system. Having said that, the potential with Transvision Waste Planner is indeed very large in a business like ours.

Our tactical master planning is so complicated that we literally cannot find the time to optimise the routes manually. In the implementation process we were able to benchmark our own best manual effort with the automatic planning of the system, and we improved our KPI's by 10-15 %.

We have not yet got as far in the operational planning as in the tactical planning, but we can see a very clear effect in the container movement business too. The pilot project showed a 17 % reduction in the trucks needed."

Michael Juul Hansen finishes, "An additional benefit with the system is that it is easy for us to take out data and play around with it in a stand-alone form. We use this for strategic assessments. For example, we evaluate the consequences of changed policies and the costs of different customer service levels."



For more information, please contact:

TRANSVISION A/S Vermundsgade 40D, DK-2100 Copenhagen, Denmark
+45 8888 8787, info@transvision.eu, www.transvision.eu