

Tanktainer Planning

Planning of Tanktainer processes harnessing Ab Ovo's expertise.



Why Ab Ovo?

- 1) *Ability to quickly create a customized, integrated planning system*
- 2) *Business process expertise in Logistics*
- 3) *Strong experience as an implementation partner*

1. The Company

Van Staalduinen Logistics is a road transport company located in Maasdijk, Netherlands. Van Staalduinen has a fleet of 65 trucks and 120 trailers, and the company specializes in the transportation of liquid goods, including oil products and liquid fertilizers. Van Staalduinen offers supplementary logistics and value-added services, including tank storage, filling, repacking, filtering and (liquid) separation. The company places great emphasis on quality and has many large oil companies and fertilizer producers in their client portfolio as a testament to their ability to deliver.

2. The Process

Distributing oil and liquid fertilizers is complex and includes a number of unique and sensitive processes per product type. Oil products are primarily delivered to auto service and shipping companies and the amount delivered is consistent and predictable. Liquid fertilizer demand has seasonal spikes and troughs, with peaks during the spring and summer when farmers and agricultural companies need the fertilizer most.

The planning and scheduling processes of oil products and liquid fertilizers is roughly the same: First, planners look for logical geographical distributions and then planners determine which products can be transported together. Van Staalduinen trailers are compartmentalized so that they can transport several different types of oil or liquid fertilizer concurrently.

A key transport calculation is the maximum load per trailer. For oil, the volume of tank compartments is the limiting factor, whereas with liquid fertilizer, the limiting factor is the weight of the fertilizer because a full tank exceeds the maximum allowable load on a trailer.

Tank transportation is scheduled a few days ahead of due dates in order to minimize costs by ensuring the timely delivery of materials. To further minimize cost, Van Staalduinen works to find truck routes that minimize both distance and driving time.

3. The Challenge

Transport planning was done manually at Van Staalduinen, and this took up a relatively long time, lacked transparency and was very error-prone. Furthermore, planning administration had to be executed separately in a Transportation Management System (TMS), and there was no link to onboard computers, so the impact of an operational disruption was not clear in real-time.

This presented itself as a clear opportunity for increases in transport planning efficiency.

4. The Solution

Ab Ovo's Road Planning System (RPS) was developed and implemented as a comprehensive solution with the Quintiq Logistics Planner at its core.

This system effectively incorporated all road transport rules, including collective agreement legislation, and even included user-friendly mapping data with the possibility of functional additions. Tank compartment planning was quickly and efficiently modeled.

The RPS imports orders directly from the TMS after which the planner plans orders on various trucks. The system optimizes the routes of the trucks, but the planner can also make manual adjustments to deliveries by freezing them, thereby excluding them from optimization. Next, a data communications interface was implemented between the RPS and the onboard computers in the trucks, which enables the planner to quickly adjust delivery schedules when disruption occur. After deliveries have been made, the RPS communicates the results back to the TMS so that the administrative processes surrounding the delivery of an order can be efficiently executed.

During planning tasks, the system effectively supports planners through features such as automatic compartment planning, automatic axle load control and the ability to control whether or not a truck is allowed to deliver to certain addresses associated with specific environmental zones. For the planning of liquid fertilizers, Ab Ovo developed an intuitive graphical planning board which delivers more robust planning insight and improved order combination per transportation ride.

5. The Result

Van Staalduinen achieved the following results through the implementation of the new RPS:

- 1) Increased plan transparency
- 2) 25% less time spent on planning activities overall
- 3) Improved communication amongst planners and between planners and drivers
- 4) Increased plan quality--4% increase in productivity through improved planning
- 5) Improved capacity planning – improved truck utilization
- 6) Decreased operating costs in terms of execution and planning

7) Improved planning flexibility -- changes are much easier to process

6. The Partners



Quintiq (www.quintiq.com) Every business has its supply chain planning puzzles. Some of those puzzles are large, some are complex and some seem impossible to solve. Since 1997, Quintiq has been solving each of those puzzles using a single supply chain planning and optimization software. Today, approximately 12,000 users in over 80 countries rely on Quintiq software to plan and optimize workforces, logistics and production. Quintiq is part of Dassault Systèmes (Euronext Paris: #13065, DSY.PA) and has headquarters in the Netherlands and the USA, and offices around the world.

As a highly experienced, Platinum Partner of Quintiq, Ab Ovo is able to implement this tool on a single-point-of-contact basis.



Ab Ovo (www.ab-ovo.com) Ab Ovo is an innovative and independent business & software solutions provider. We provide highly specialized logistics software solutions, supply chain analytics and rail cargo solutions. Ab Ovo is a key player in the field of logistics with extensive experience and expertise in supply chain management, logistic processes and advanced planning, scheduling & optimization solutions.

Ab Ovo delivers unique software solutions based on our in-house software development and specialist third-party software from a selected number of highly innovative partners. Offices are located in the Netherlands (Rotterdam (HQ) and Amsterdam), Germany (Düsseldorf), Denmark (Copenhagen), USA (Boston) and China (Shanghai). For more information about our activities and relevant references, please visit our website.

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