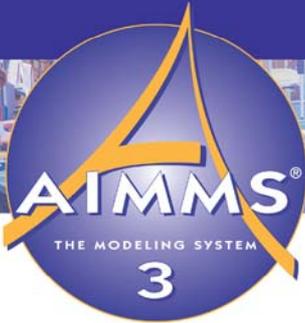


OptaSoft develops SCM optimization tool for one of Europe's largest pet food companies



With the support of AIMMS' robust and flexible platform, AIMMS Service Partner OptaSoft was able to develop a Supply Chain Management tool for Provimi Pet Food in less than four months.

Business description & background

Provimi Pet Food is one of the world's largest animal feed manufacturing and commercial companies, dealing with pet food, vitamins, and special ready-made and semi-finished products. The company developed its pet food division exponentially in the recent years, is present in 17 countries considering Europe only, has bought 20 other companies between 2002 and 2006, including 12 from Europe. Its shares have been doubled since 2001.

The challenge

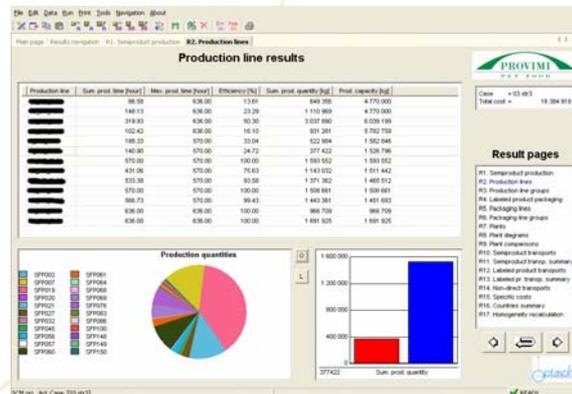
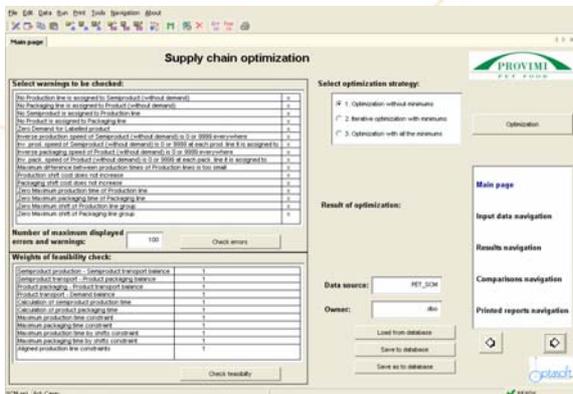
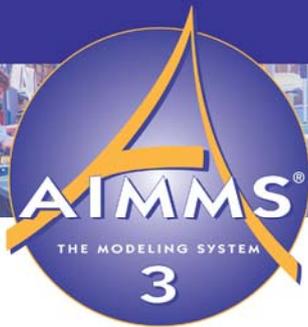
The company intends to continue the expansion both globally and in Europe. The management faces new challenges because of the sudden increase in the number of European affiliated companies, and particularly the production plants. The production capacities distributed in factories of different history should be coordinated to minimize the logistic and production costs, and to provide the company and the plants timely and reliable information. The European management decided to introduce an optimizing software system to aid the supply chain. Based on forecasts, optimal allocation of production and transport is targeted for each month for a year, in a rolling-horizon procedure.

Considering one division only, the supply chain problem involves at least eight plants each containing one to three production and packaging lines, more than 80 customers, and more than 800 products. Production, packaging, and transportation imply variable and fixed costs. Stepwise constant functions are specified to the working shifts. The quantities of produced /packaged / transported semi-product / product either have to exceed a defined minimum level or have to be zero. These levels express the economical consideration that it is not worth to produce, package, or transport, below a minimum quantity (e.g. one truck, in the case of transportation). In some cases the product should be transported to a customer from a single, not a priori assigned, plant even if that product can be produced in several plants. This homogeneous transport prevents the customer from receiving a mixture of different quality products that might occur because different raw materials and processing methods are applied at different plants. These features result in a very difficult and complex problem, and necessitate the development of a well-formulated mathematical model as well as special preliminary procedures before commencing the optimization itself.

The solution

After a survey of tools and services, and based on the references, Provimi's management selected AIMMS as a developing tool and OptaSoft as its developing company.

The supply chain is simplified to three levels: production lines, packaging lines, and customers. Distribution centers are taken into account through distinguishing between transport categories. Products are classified to categories when production is considered. Modeling of the transport is simplified by lumping small customers to geographical regions.



With the support of a robust and flexible platform such as AIMMS, OptaSoft was able to develop a prototype of the SCM optimizer in less than four months. The optimizer communicates through a data base, and provides the user with interactive graphical feedback. The user can control decision details in order to smooth fluctuations in monthly production of the plants. Generating a month's production & distribution plan takes approximately 5 minutes with a personal computer, and thus design variants can be generated in reasonable time. Design scenarios can be temporary stored and then later compared.

Customer Quote

"I have met a well-prepared team in OptaSoft, who provided us an optimal solution by tailoring AIMMS to the problem of our company." Zoltán Valentinyi, Supply Center Manager, Provimi.

About OptaSoft



OptaSoft Research and Development Ltd., founded in 2004, undertakes research and development of mathematical models and unique software products for optimally solving distribution, supply chain management, production scheduling, and logistic problems of middle and large scale industrial and financial companies. The team of OptaSoft specializes in fast solution development, based on AIMMS.

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About AIMMS

Paragon Decision Technology is the developer of AIMMS, the modeling tool of choice for professionals when developing optimization-based decision support applications or components. It is used by leading companies worldwide in a wide range of industries in areas such as supply chain management, energy management, production planning, logistics, forestry planning, warehouse management, and risk-, revenue-, and asset- management.



AIMMS is a registered trademark of Paragon Decision Technology B.V.

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