



PRIMARY

decision support systems



Optimum Supply Chain Management

Optimisation technology is applied to enterprises and organizations with a Supply Chain with scope to support decision making regarding operational as well as strategic planning. The result is the most efficient and rational infrastructure and operation of the whole Supply Chain. This, in turn, leads to decreased operational cost in all involved procedures and to increased profits.

Procedures

PRIMARY is designing and developing fully parameterized Supply Chain optimisation solutions. Indicatively, the respective software is focused on the following procedures:

- Procurement and storage of raw materials and goods
- Transportation of intermediate and final products
- Placement and dimensioning of production lines and warehouses
- Redesigning the Supply Chain and the transportation network

Data entered to the mathematical model

- Information about all the levels of the Supply Chain (suppliers, production lines, warehouses, clients, etc.)
- Information about all the delivered products
- Design and cost of all the involved productive procedures as well as of all the constraints imposed
- Design and means of the internal and external transportation of products
- Information about the availability and cost of raw material as well as seasonality of demand
- Customer information and their demand per product code

Mathematical modeling - Optimisation

- Development of the respective mathematical model
 - Definition of the objective function (cost / profit)
 - Modeling of all parameters and constraints
- Application of appropriate optimisation algorithms
- Detection of the parameters' values that result to the global minimum / maximum of the objective function\

Results

- The suggested methodology results in a significant increase in competitiveness and reliability as well as in decrease of the operational costs and the required operational resources for the whole Supply Chain, based on the following:
- Optimum design of the network and optimum dimensioning of production lines and warehouses
 - Optimum transportation planning and operation of the involved procedures
 - Optimum selection of suppliers and accurate estimation of required volumes of raw materials