Mars

OPTIMIZING PRODUCTION AND SUPPORTING DECISIONS

IN A DEMAND-DRIVEN MARKET, manufacturers have to satisfy customers to succeed. This is why Mars Inc. adopted Finity, an ILOG-based optimization application developed by QED International, to solve the company's scheduling problems.
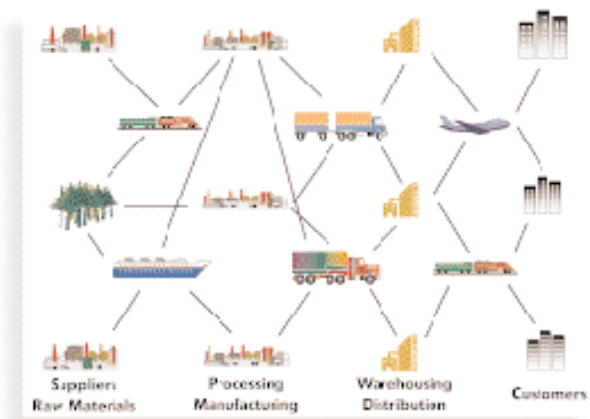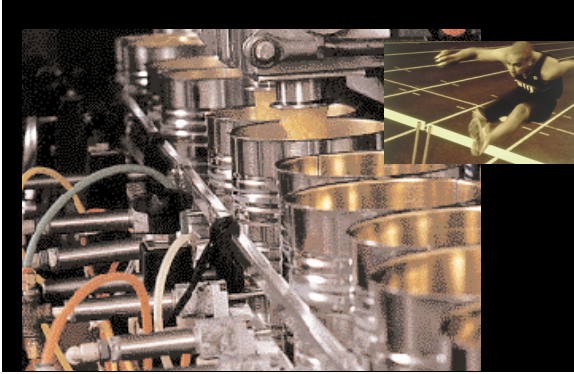
The multinational has several operations in Australia, and one of them, Uncle Ben's, is the country's No. 1 pet-food maker. The subsidiary was having trouble matching production to demand, so it needed a system that could do production planning and scheduling from ordering raw ingredients for its products all the way through to shipping the products to the retailers. It tried other existing commercial planning software, but none provided the full coverage Uncle Ben's needed. To solve its scheduling problems, Mars enlisted the help of QED.

QED had tapped the power of the ILOG Optimization Suite and its C++ constraint-based engine, ILOG Solver, in creating Finity, which proved to be the solution to Uncle Ben's scheduling problems. By more closely matching production to demand with the application, the subsidiary now meets customer orders with supply orders, ensuring its products are made and delivered on time. Finity has been so successful, in fact, it is now being used at other Mars operations in Australia.

"The ILOG Optimization Suite provided the functionality and performance necessary to solve these complex problems with a single optimizing model that provides the maximum savings to our clients."

Ross Dye
Managing Director
QED International

Suppliers
Raw Materials

Processing
Manufacturing

Warehousing
Distribution

Customers

Finity can be used to match production to orders.

MEETING DEMAND THROUGH OPTIMIZATION

Optimizing its production management in Australia gave Mars a competitive edge. With Finity and its ILOG optimization engine, the multinational has vastly improved the efficiency with which it meets customer demand through ordering, processing and delivering products. Finity encapsulates all the constraints concerning supplies, customer orders and production limitations, and computes optimal plans and schedules that enable Mars to make more effective strategic short- and long-term decisions.

ILOG optimization backs Mars in keeping it a leading food producer. Mars has successfully applied Finity to many scheduling problems, enabling it to better its service throughout Australia. The application has helped the company maintain its position in the food industry, and through modeling, allowed it to plan far in advance for changes in the market.

PROJECT

Finity is based on a proprietary process developed by QED to ensure rapid modeling of supply-chain and manufacturing processes. ILOG Solver, ILOG Scheduler and ILOG Planner form the mechanism for optimizing the models, while ILOG Views serves as the highly intuitive graphical user interface. The application's C++ libraries make it fully portable across the UNIX and Windows 95/NT operating platforms.

BENEFITS

Finity generates fully optimized scheduling solutions, minimizing transport, inventory and production costs and maximizing customer service levels. Planning time is greatly reduced, improving response time and allowing Mars to rapidly alter plans to meet changes in orders, factories and markets. The application is also directly applied in decision-making. Management is able to create scenarios that can be evaluated and compared in a matter of minutes, a process that used to take days and even weeks for experienced planners to perform.