



Supply Chain Planning Solutions

# Sales & Operations Planning

Supply planning and demand planning can be combined into a holistic process most refer to as Sales and Operations Planning (S&OP). The S&OP process typically entails the creation of a master supply/demand operating plan that establishes a self-consistent, feasible set of inventory plans, production plans and constrained sales plans. To successfully create and manage such a complex process, companies must develop and support an integrated environment of collaboration, reporting and analysis that is supported by the ideal workflow and technology. WAM Systems' Advanced Planning Module was developed for this reason—to be the ideal supporting technology for the S&OP Process.

The Advanced Planning Module—part of the Picaso™ supply chain solution—provides a simulation and optimization environment to create a balanced S&OP plan, taking into account product demands, inventory targets, manufacturing capacities, and supply chain constraints.

Optimization comes in the form of integration with an optimization engine used for developing production plans that help minimize costs and maximize profitability. As an example, the optimization engine can provide a

means of rapidly determining not only what portion of a forecast is feasible to produce, but what product mix is most profitable to produce. In situations where capacity exceeds demand, the optimization tool identifies opportunities to increase profits by highlighting the most advantageous products and markets upon which to focus sales efforts.

And, like all of the Picaso modules, the Advanced Planning Module presents its results in an easy-to-understand user interface. The user can explore the solution interactively, and can modify the solution to include qualitative considerations that were not mathematically modeled.

The Picaso™ Advanced Planning Module blends the best of shrink-wrap software with the flexibility of a programming language. Since it was built for the process industry, the solution easily handles complex, multi-site supply chain problems with minimal configuration. When unique problems arise, it uses the power of Picaso's model formulation language combined with the optimization engine to quickly generate solutions.





**What economic characteristics can be populated to represent the financial model of my supply chain?**

Picasso's standard set of financial transactions include:

- spot and contract purchases (for finished goods, intermediates and raw materials)
- spot and contract sales
- shipping costs
- distribution costs
- production costs
- energy and resource costs
- inventory carrying costs
- penalty costs for variance around inventory targets

| The 9-Step S&OP Process of Demand-Driven Supply Network Leaders |                                   |
|---|-----------------------------------|
| Collect Sales and Market Input                                  | Picaso's Demand Management Module |
| Develop a Demand Plan   |                                   |
| Refine Demand Consensus   |                                   |
| Shape Demand Based on "What-If" Analysis for Demand and Supply  | Picaso's Advanced Planning Module |
| Develop a Constrained Plan                                      |                                   |
| Conduct "What-If" Analysis                                      |                                   |
| Develop a Consensus Plan  |                                   |
| Publish the Constrained Plan                                    |                                   |
| Measure the Plan and Publish the Metrics                        |                                   |

9-Steps Source: AMR Research



**What optimization or solving technology is used to automatically generate plans based on constraints?**

Picasso offers the option to use integrated optimizer engines from either ILOG or DASH (the two leading optimization engines available for complex mathematical optimization). Users can set min and max values on any transactions, and configure the system for all constraints. Multiple, integrated models (objective functions, constraints, bounds) can be maintained allowing users to answer different types of questions without having to build new, standalone models.

**What standard planning time-periods are provided with the application?**

Days, Weeks, Months, Quarters, Years

**How can my planners monitor plan vs. scheduled performance and track current month progress against plan on a daily or ad-hoc basis?**

All these data are available to Picasso's standard capacity planning model allowing side-by-side comparisons of plan, schedule, and actual performance.

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