



Factory Planner

As customer demand changes, shifts in resource status and material availability can occur. i2 Factory Planner™ is designed to enable companies to quickly synchronize factory production plans and schedules to meet changes in demand. It assists planners and buyers in creating efficient material plans that are aligned with factory schedules, thus providing synchronized material flow through the factory. The result is a plan tailored to meet customer delivery requirements and other key operational and financial objectives.

Solution Capabilities

i2 Factory Planner increases profitability by decreasing manufacturing lead-time, increasing delivery date performance and asset utilization, and reducing inventory liability. i2 Factory Planner capabilities include:

- Quick identification of potential supply chain problems
- Feasible procurement and production plans against shop floor and supply chain constraints
- Accurate due-date quoting to improve customer service
- Modeling richness to represent a wide range of manufacturing environments
- Quick “what-if” scenario analysis for effective decision making

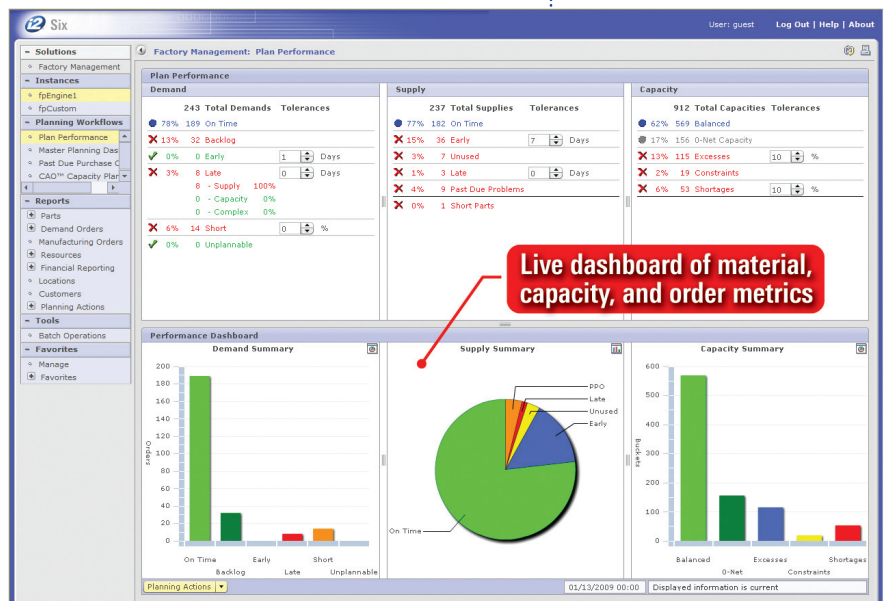
Problem-Oriented Planning Can Enable Immediate Resolution

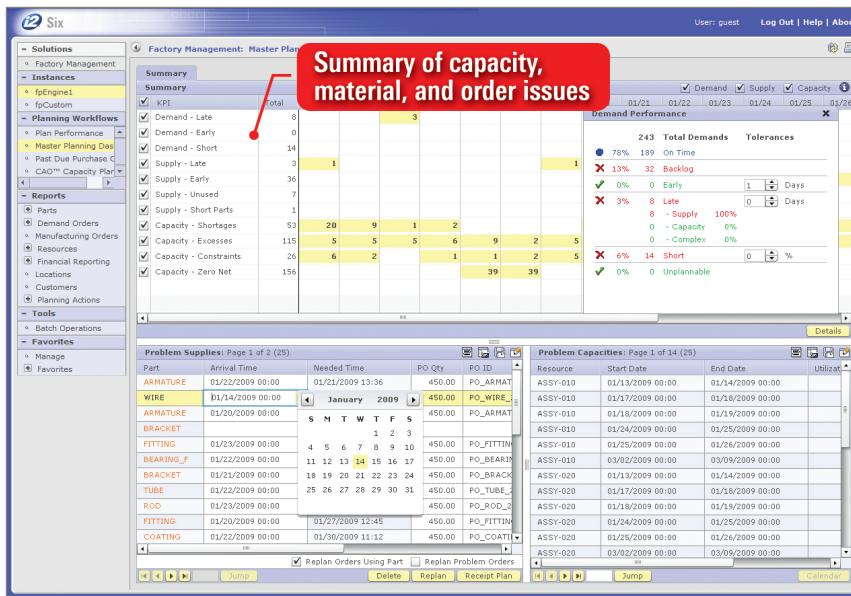
i2 Factory Planner’s problem-oriented planning technique goes beyond simple constraint-based planning and exception-based reporting. Planners are provided with a holistic view of the factory plans and a comprehensive list of key performance indicators (KPIs) on demand, supply, and capacity. Based on business priorities and feasibility, planners can concentrate on a specific area first and then “drill down” into the details to understand specific issues. i2 Factory Planner is designed to provide time-phased reporting on the factory KPIs, which can enable planners to take corrective measures for short-term and long-term planning. The multiple problem solving tools available in the application further enable users to improve the plan quality and arrive at a feasible and executable plan.

“When I compare our systems to those of other companies, I see that we have much greater visibility into our production and can make reliable promises to our customers. We are a very competitive organization now and can offer our customers better service, capacity reservation and rapid production times.”

— Joachim Heidrich, Leader, Production Planning, **Deutsche Edelstahlwerke**

*Workflow-Oriented User Experience
Enhances Planning Capabilities*





Master Planning Dashboard: Maintains metric classifications and provides a time-phased view of factory problems

i2 Factory Planner features a workflow-oriented user interface to facilitate key planning activities. The plan performance dashboard uses metrics and parallel pie chart visualization to provide visibility into plan quality. Metrics are linked to a “one-stop-shop” master planning dashboard, which highlights planning metrics in a time-phased manner and enables users to synchronously resolve material and capacity issues in a single screen. Additional enhancements include a multi-resource load graph and an advanced scenario planning dashboard, which permits detailed analysis of plan quality in a rich historical context.

Comprehensive Support for Both Finite and Infinite Capacity Planning

Most planning systems cannot consider both material and capacity constraints simultaneously, making it difficult to generate good plans. In contrast, i2 Factory Planner considers capacity and material constraints together, enabling planners to generate high quality plans through multiple planning options:

- Infinite capacity planning (ICP) creates a plan with the ideal level of resource capacity needed to meet customer demand. i2 Factory Planner flags overloaded resources, allowing the user to take corrective action in order to meet the delivery date.
- Constraint anchored optimization (CAO) provides the planner with a choice of automated load-balancing algorithms to create an optimal finite-capacity constrained plan based on various material flow and capacity utilization policies.
- Simultaneous capacity and material optimization (SCMO) introduces a new turn-around-time (TAT) based planning approach, which enforces maximum utilization of the critical resources by maintaining tight production cycle times and order-by-order planning. This planning approach enables better synchronization of the capacity, improved material assignment, and reduction in work-in-process inventory.

Rich Modeling Representation Can Support Any Level of Complexity

i2 Factory Planner's memory-resident planning architecture provides the ability to model manufacturing problems involving complex bill-of-material structures, alternate part substitution, engineering changes, campaign constraints, multiple and re-entrant operations, and sequence-dependent set ups. i2 Factory Planner can also be integrated with order management systems, giving customer service representatives capable-to-promise delivery date quoting or order status, taking into consideration material and capacity constraints. In addition, i2 Factory Planner is designed to generate optimized production plans for a plant (or multiple plants), department, work cell, or production line by scheduling backward from the requirement date, as well as scheduling forward from the current date, while simultaneously considering material, capacity, and due date constraints.

Create Powerful Analytical Reports

i2 Factory Planner provides a wide variety of standard and customizable reports such as:

- Drill-down, hot links, and quick spreadsheet downloads
- User-defined columns, optional columns, filters, and summary groups
- Notification when newer data is available, allowing instant updates to match the latest plan
- Highly customized time-based summary reports that can be created with the easy-to-use, yet powerful report creation wizard

Key Features

Fast, Advanced Planning and Scheduling

- Supports Theory of Constraints using CAO solver
- Customizable for a wide range of industries and business objectives
- Highly scalable—extremely fast planning with world-class plan qualities
- Powerful and fast memory-resident engine that generates plans and detailed schedules in minutes as compared to hours in traditional ERP
- Co-existence with ERP and MES using various industry standard integration protocols
- Capable-to-promise delivery-date quoting, simultaneously considering material and capacity constraints
- Deep level bill-of-material, alternate routings, routing segments, and routing attributes
- Alternate parts, use-up parts, phantom parts (kitting), attributed parts, subcontracted parts, sequence dependent set ups, and split demand across alternate procurements
- Procurement plans and purchase orders management—expedite, de-expedite, and cancel

Usability

- Concise, consolidated view of material and capacity issues with drill-down capabilities to affected orders, problem parts, and bottleneck workstations
- Ability to create customizable views of production, inventory, costs, problems, and explanations
- Rich internet application (RIA) based user interface that configures reports to match each user's workflow, providing summary views of the plans generated—planners can drill down on the specific constraints that impact the due dates of orders
- Custom report wizard, with grouping, summarization, and filtering
- Integrated tools to fully automate planning, sequencing, incremental updates, interactive what-ifs, and manual overrides
- A wide variety of analysis tools that are constantly updated with real-time changes in the material or capacity plan
- One-button export views to spreadsheet for even greater reporting flexibility
- Multiple levels of authorization definable by user

Supported Hardware and Software Platforms

Server

- Win2003 & 2008
- AIX
- HP
- Solaris

Databases

- DB2
- Oracle

Client

- Windows 2003, XP

Browser

- Internet Explorer

(For exact version, please contact i2 Technologies, Inc.)

Benefits

With its proven track record across various industries, i2 Factory Planner can help improve the manufacturing efficiencies in a supply chain. The solution can help reduce manufacturing cycle times, inventory levels, and response time to customer demand. By allowing planners to coordinate production schedules with the realities of manufacturing and factory constraints, i2 Factory Planner can improve throughput and reduce waste. The solution is designed to provide a rapid response capability to help quickly react to interruptions in execution. By leveraging synchronized planning and execution, i2 Factory Planner can help make an enterprise lean and efficient.

Summary

i2 Factory Planner, a cornerstone product of i2 Production and Distribution Planning Solutions, is designed to provide intelligent decision support for production planning and scheduling. It is designed to simultaneously manage material and capacity constraints to develop feasible operating plans for plants, departments, production lines, or work centers. By using i2 Factory Planner, planners and schedulers can intelligently optimize the performance of a manufacturing facility to meet business objectives such as improving due-date performance, reducing lead times, improving throughput, and reducing inventory and operating expenses. It can streamline and align the activities of the production control, manufacturing, and procurement planning teams by automating the mundane, so the focus can be shifted to more critical tasks.

For more information on i2 Factory Planner and other i2 solutions, visit www.i2.com.



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