Advanced Planning and Scheduling

An extension of scheduling, APS incorporates the strength of the Scheduling engine and enhances it with advanced functionality such as multiple constraint scheduling, a wide range of scheduling methods, visual drag-and-drop scheduling, capability and dependent capability-based scheduling, real-time capable-to-promise functionality, and advanced material planning functionality.

MULTIPLE RESOURCE VISUAL PRODUCTION SCHEDULING BOARD
Easily manipulate the schedule with drag-and-drop manipulation and drill-down techniques for multi-level assemblies and operation details. A main control center for scheduling resources graphically displays schedules for a group of resources in one screen. Dynamically change the timeline of the view to see minute operations and analyze the impact of long running operations instantly.

MULTIPLE CONSTRAINTS
Set up every operation with multiple constraints or resources (e.g., machines, tools, skilled labor, raw materials, or available subassemblies).

RESOURCE ELIGIBILITY
Define resources within a specific resource group with individual characteristics to improve scheduling accuracy.

AUTOMATED SCHEDULING BY CAPABILITY
Define a capability or skill level that can be tied to multiple resources rather than a resource group or individual resource in the planning process. The APS engine then determines, based on the available resources, which individual resource to schedule for the operation.

DEPENDENT CAPABILITIES
Link dependent capabilities that the scheduling engine schedules along with the primary capability when operations require dependent skills to perform the operation.

FINITE OR INFINITE CAPACITY
Define each resource with either finite or infinite capacity. When a piece of the schedule is moved, the resource is rescheduled according to its type.

MINIMUM WIP SCHEDULING
Use a unique scheduling algorithm designed to minimize work in process by scheduling a job to ship as early as possible. APS then back schedules to start working on the job as late as possible.

DIMENSIONAL PLANNING
Schedule by volume and quantity using dimensional planning that is not time constrained.

RATE-BASED SCHEDULING
Schedule cells based on production throughput rates rather than time.

MATERIAL CONSTRAINTS
Consider material availability as a scheduling constraint. Integrated directly with Inventory and Purchasing, the APS system knows when material is due and schedules accordingly.

OPTIMIZATION RULES
Generate a schedule based on rules assigned to individual resources.

ADVANCED MATERIAL PLANNING
Increase throughput by considering material and component availability as a constraint. Advanced material planning, an integral feature of APS, facilitates intelligent stocking and procurement of material requirements.

The schedule function recognizes materials earmarked as constraints, gives the master scheduler material availability and considers supplier calendars for a more realistic schedule.

CHANGE IMPACT ANALYSIS
See the immediate impact of proposed changes on other orders to make informed decisions about desired changes.
TIME ADJUSTMENT
Automatically take into account resource utilization and resource group efficiency for more accurate load calculation.

BALANCED OPTIMIZATION
Concurrently consider priority, slack time and setup time when determining load balance.

SINGLE CELL SCHEDULING
Schedule an entire job or assembly within a single work cell.

CAPABLE-TO-PROMISE
Easily manage customer expectation with real-time capable-to-promise functionality in Order Management. Enabled with APS, Vantage capable-to-promise uses the scheduling engine to determine accurate promise dates and offers order processing single click confirmation or order cancellation based on the projected due date.

UNLIMITED WHAT-IF
Create unlimited what-if scenarios to view the effect of changes on your shop floor.

MULTI-PLANT COMMUNICATION
Ensure that interdependent plant schedules are coordinated.