SYSPRO™
Simplifying your Success

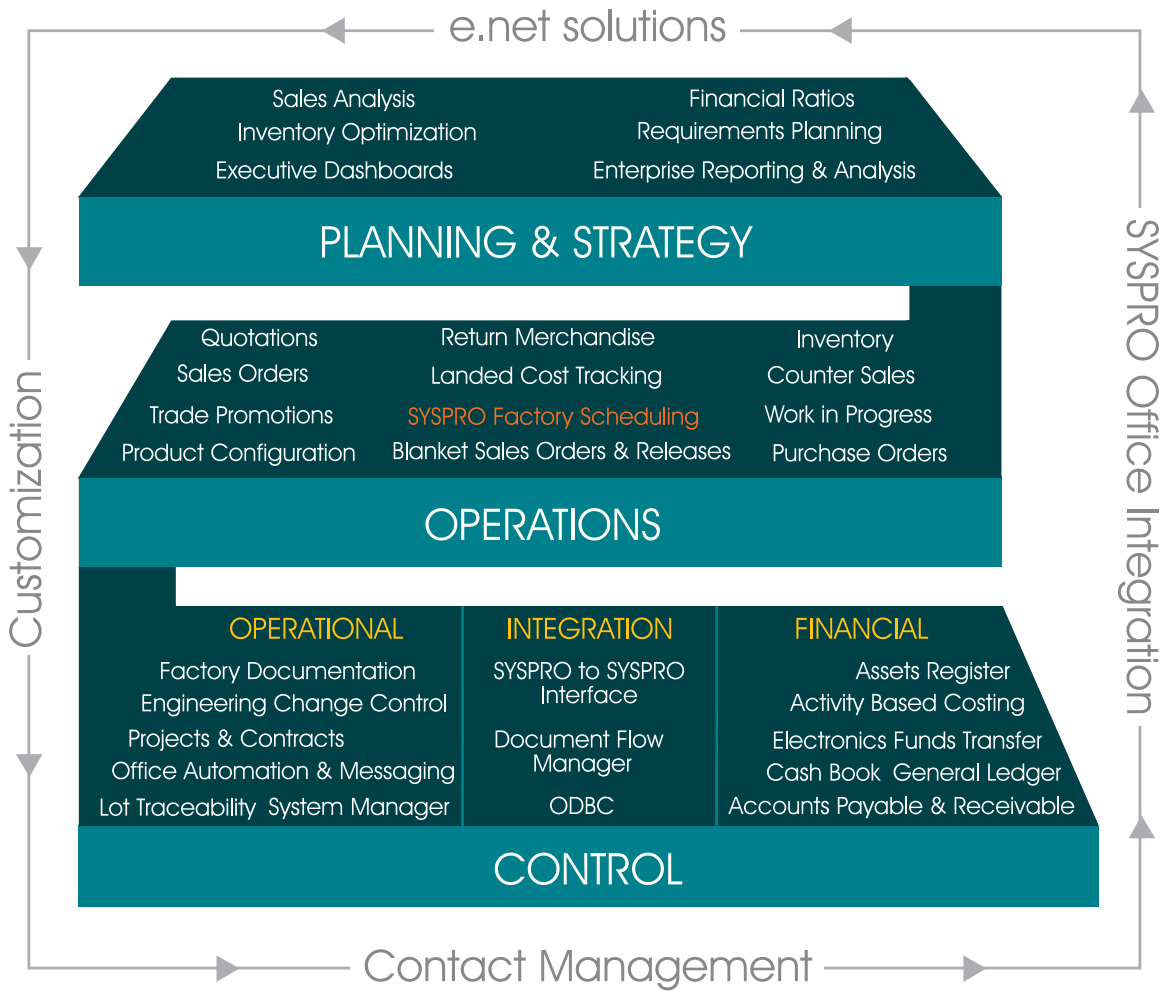
SYSPRO Factory Scheduling

Introducing SYSPRO

SYSPRO is an internationally-recognized, leading provider of enterprise business solutions. Formed in 1978, SYSPRO was one of the first software vendors to develop an enterprise resource planning (ERP) solution. Today, SYSPRO is a global business solutions vendor, represented on six continents and over 1600 channel and support partners. Over 15 000 licensed companies across a broad spectrum of industries in more than 60 countries trust SYSPRO as the platform on which to manage their business processes.

Customer focus is a core component of SYSPRO's corporate culture and is one of the key reasons why SYSPRO maintains a strong leadership position in the enterprise application market. By focusing on people and building lasting relationships with customers and partners, SYSPRO consistently excels at guiding customers through all aspects of their implementation. The aim is to deliver world-class software that gives customers the control, insight and agility they need for a competitive advantage in a global economy. As such SYSPRO's solutions provide a unique combination of robust and scalable yet current technologies that provide near-zero risk and high return on investrment.

SYSPRO is continually developing remarkable software that simplifies operational effectiveness and keeps customers in control of their businesses. Our vision is focused on delivering customer needs today and in the future.



Factory Scheduling in SYSPRO

Factory Scheduling is one of the manufacturing modules within the suite of SYSPRO products. Factory Scheduling can integrate with Inventory, Work in Progress, Bill of Materials, and Purchase Orders.

Control your production process with SYSPRO's Factory Scheduling

Without control of your production process it is impossible to predict what will come out of your factory. It is therefore impossible to give customers accurate and reliable due dates or provide them with updated information on the expected progress of their jobs.

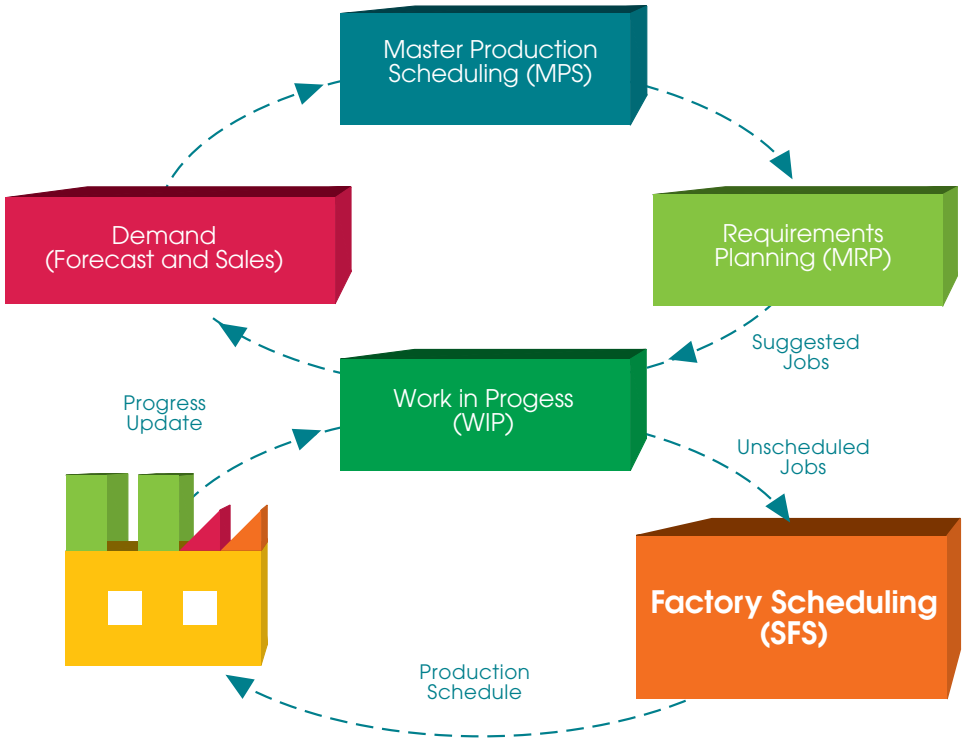
Without control of production you cannot ensure planned efficient utilization of resources.

For companies who require greater control of their operations, increased customer service while reducing costs, SYSPRO Factory Scheduling is a production scheduling system that provides an interactive decision support tool that helps balance demand and capacity.

SYSPRO Factory Scheduling will assist you in maintaining accurate and up to date production schedules that take account of the complexities of your factory. This will help you to achieve better coordination between work centers, increase productivity, reduce work in progress and achieve better levels of service to your customers.

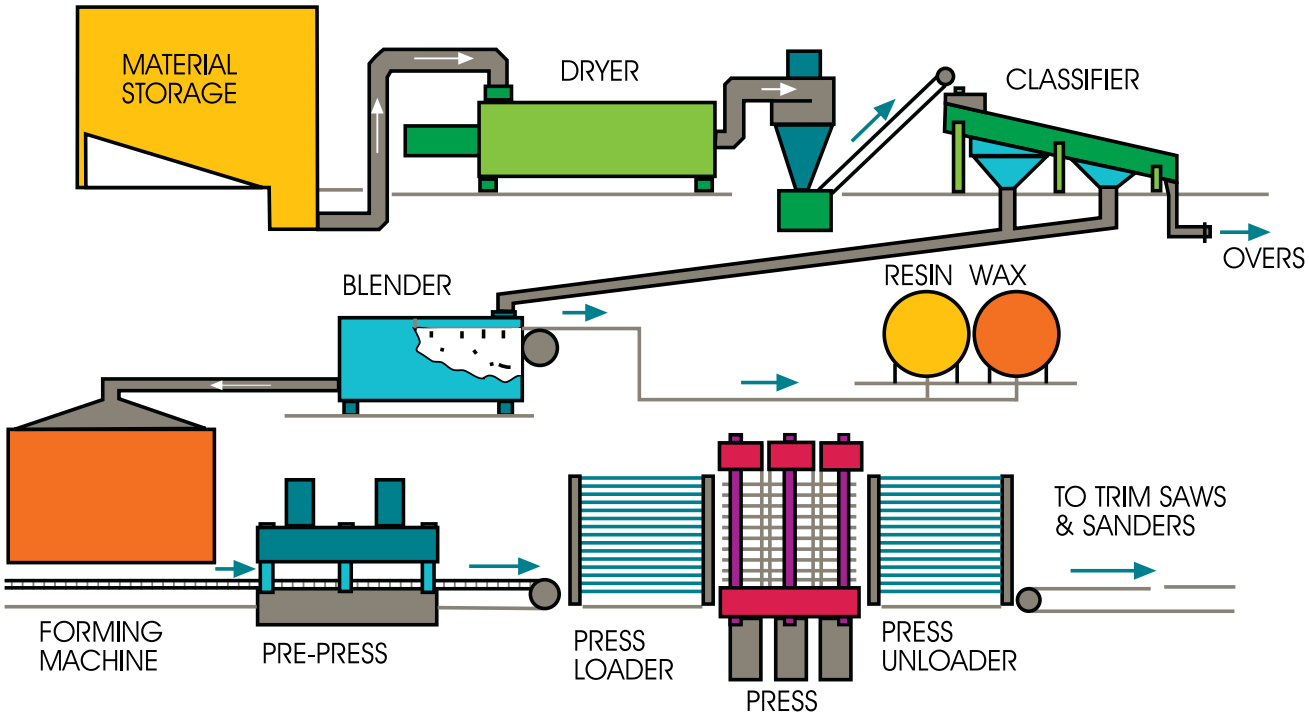
SYSPRO Factory Scheduling provides you with the option of three products, ranging from the least sophisticated **Graphical Planning Board**, through to the more sophisticated **Finite Scheduler** and the most sophisticated **Advanced Scheduler**, classified as an APS (advanced planning and scheduling) system.

These products are the result of collaboration between SYSPRO and Preactor International, a leading provider of, and specialist in, scheduling solutions. The solutions provide the depth of features and the experience of the Preactor products, structured to work elegantly, simply and seamlessly with the core SYSPRO manufacturing modules. In this way SYSPRO provides you with a complete solution to manage your factory effectively.



Model your unique production environment

No two factories are exactly alike. The ability to model your specific factory accurately is therefore critical. Using the standard building blocks of the SYSPRO **Bill of Material** module and further modeling capabilities in the **Factory Scheduling** module you can model the constraints in your factory to the level of detail required in your environment. The setup of your factory model can easily be adjusted as your factory evolves to always accurately reflect the reality. The product routings only have to be maintained in one place (SYSPRO Bill of Material), reducing double work and inconsistencies.



SYSPRO's Factory Scheduling allows you to model your unique production environment by providing:

- Use of the standard Bill of Material setup
- Flexible mapping of definable attributes (e.g. color, thickness, etc.)
- Use of modeling structures such as transfer batch quantities, maximum operation spans, oven-type resources, secondary product and machine constraints
- Customizable scheduling rules
- Support of the production initiatives in your factory like Lean Manufacturing or Theory of Constraints (TOC), by using predefined or customized advanced scheduling rules.

Anticipate factory performance

Everybody measures factory performance after the fact. Not everybody has the ability to accurately predict factory performance before the fact. Factory Scheduling gives you the ability to anticipate the utilization and service levels of your factory down to a machine level. Using this you can take action to ensure the desired effectiveness of your factory before it is too late.

- Hot spots grid provides the anticipated utilization levels by machine per week
- The visual Gantt chart representation of the schedule gives you the ability to identify obvious potential problem areas at a glance
- The performance metrics gives you the measurements to judge the quality of your current schedule
- The 'Highlight late operations' feature allows you to instantly identify orders that will be late according to the schedule. You can then take action to resolve this problem, understanding the knock-on effects.

Schedule Performance Metrics

Job Count Data

	Early	Late	Incomplete	Started
Absolute	80	1	2	61
Percentage	55.56	0.69	1.39	42.36

Job Completion Data

	Total	Minimum	Average	Maximum
Early Time	8632 Days 23:31	23 Hours 59 Mins	107 Days 21:54	223 Days 10:14
Late Time	9 Days 10:07	9 Days 10:07	9 Days 10:07	9 Days 10:07
Setup Time	20 Hours 12 Mins	0 Hours 00 Mins	0 Hours 15 Mins	0 Hours 42 Mins
Lead Time	823 Days 14:09	0 Hours 00 Mins	10 Days 4:02	55 Days 7:00
Added Value Percentage		1.72%	41.60%	100.00%

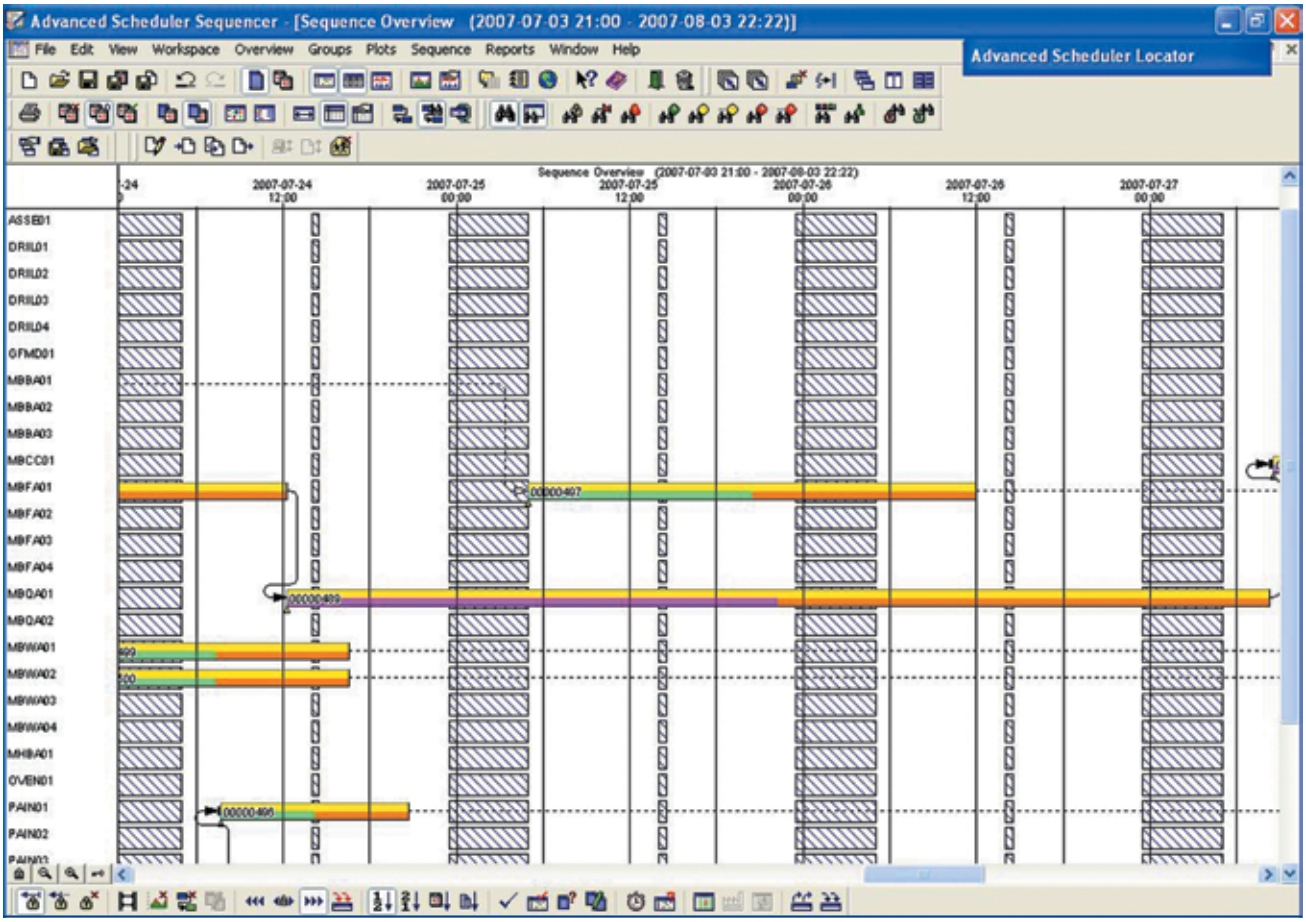
Resource Data

	Minimum	Average	Maximum
Working Percentage	0.00	3.89	15.33
Setup Percentage	0.00	0.02	0.10
Unavailable Percentage	0.00	70.77	73.12
Idle Percentage	11.55	25.33	100.00
Utilisation Percentage	0.00	14.47	57.04

Schedule Span: 2007-01-01 08:00 - 2007-06-19 09:30 | 169 Days 1:30 | Close

Keep track of customer due dates

Scheduled and current in-progress jobs can easily be identified on the Gantt chart using attributes like customer, order number, stock code etc. This gives you the ability to accurately keep customers informed on expected due dates and progress.

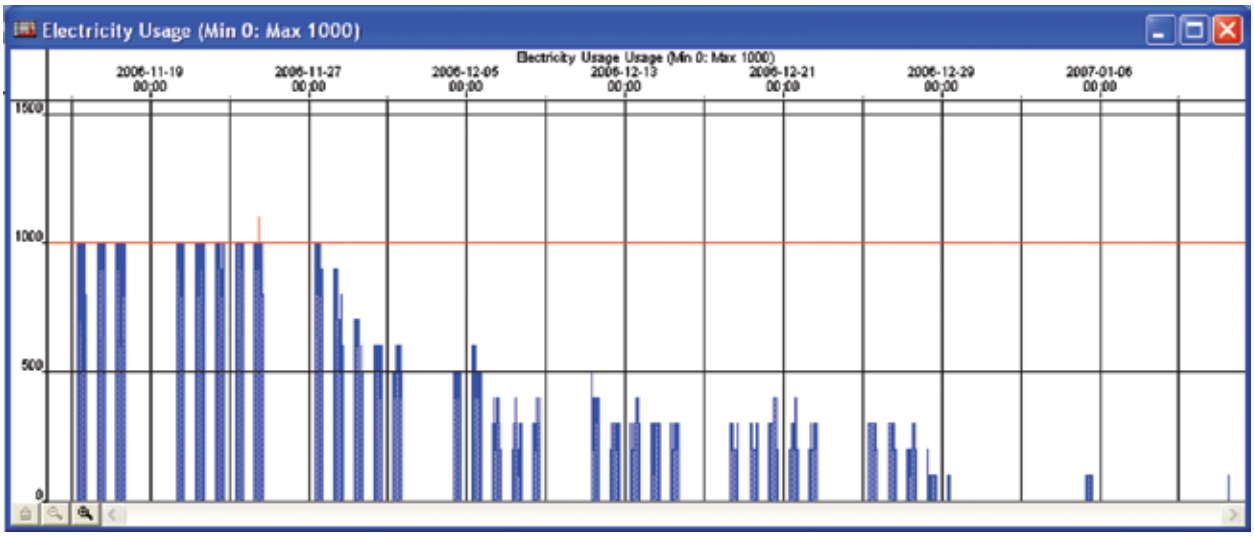


Optimize utilization of the factory

- A number of automated scheduling algorithms exist in Factory Scheduling to schedule operations in a way that best suits your environment.
- These algorithms can sequence jobs in the desired sequence (by due date, by priority etc) and then based on this schedule forward from the earliest start date or backward from the due date
- Jobs can also be scheduled in a bi-directional direction around an already scheduled and fixed operation
- In the **Advanced Scheduler**, predefined advanced scheduling rules exist which use a parallel loading method to optimize the schedule according to specific objectives (e.g. minimize setup time, minimize WIP etc)
- In the **Advanced Scheduler** you can compile your own unique scheduling rules using the event script utility or even Visual Basic if you wish
- The use of the locator function enables you to apply different scheduling rules to different products, machines, work centers etc.

Remain agile

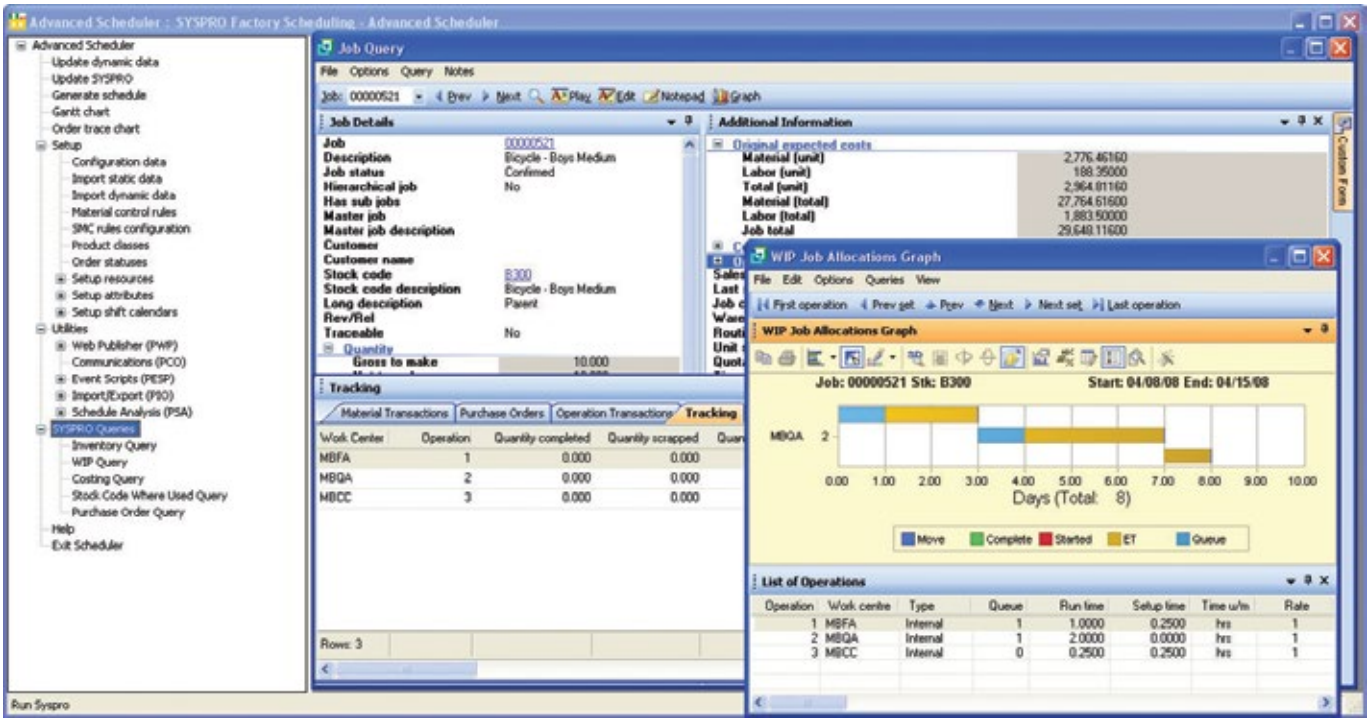
You can reschedule as often as you want. This is possible because of the detailed constraints that are modeled in the Scheduler and the use of automated scheduling rules. Your schedule will therefore always reflect the current reality of your factory. Should you wish to make changes to your schedule by, as an example, re-prioritizing production, your schedule can be adjusted to reflect this in a very short time.



Customize the solution to your requirements

Not everybody uses scheduling the same way. The frequency with which you reschedule, the way in which you schedule, the data load, the complexity of scheduling rules employed, the business process, etc., may be very different from one implementation to another.

- The event scripting language gives you the ability to customize your implementation to suit you. You can develop customized advanced scheduling rules or automate features based on a predefined event
- The use of the report writer enables you to customize standard reports or develop your own new reports
- The import/export script writer allows you to import or export information to and from other systems
- The Communications Object allows you to communicate with other systems in real time by sending messages triggered by events.



Synchronize your production

Using SYSPRO Factory Scheduler you will now have one official schedule for the entire factory. In conjunction with a formalized business process, the latest official schedule will be available to all the relevant parties in your organization when required.

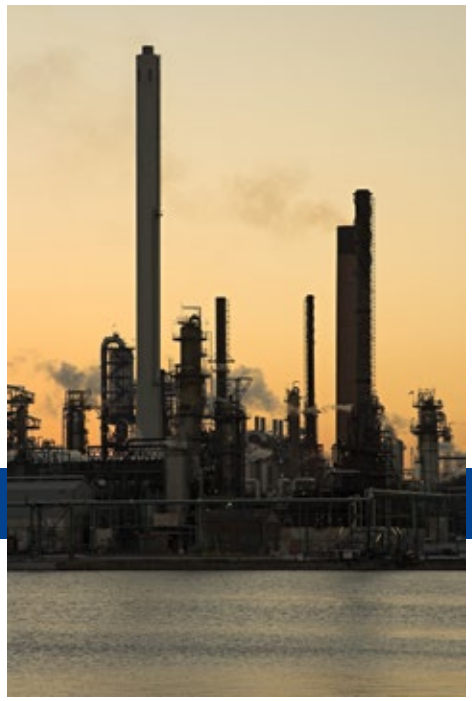
- Publish the latest schedule Gantt chart on your intranet in HTML format
- Update the latest scheduled dates to SYSPRO Work in Progress (WIP)
- Distribute the schedule to all other relevant systems using the Import/Export utility and the Communications Object

Once production has been completed you can measure conformance to the schedule.

Depth of experience and support

As the **SYSPRO Factory Scheduling** is a collaboration between SYSPRO and Preactor International, you have support from the SYSPRO support team, backed up by the dedicated team of experts at Preactor. The products have the advantage of experience gained at several thousands of implementation in all manufacturing industries and on all continents.

The PrSpy diagnostic tool assists you (and SYSPRO) to analyze your system to understand technical and functional issues you may be experiencing. This tool monitors all activity in the system so that you can follow the exact sequence of events and isolate where a problem occurs. It also gives you access to the data files.



Factory Scheduling consists of three products:

I. The Graphical Planning Board

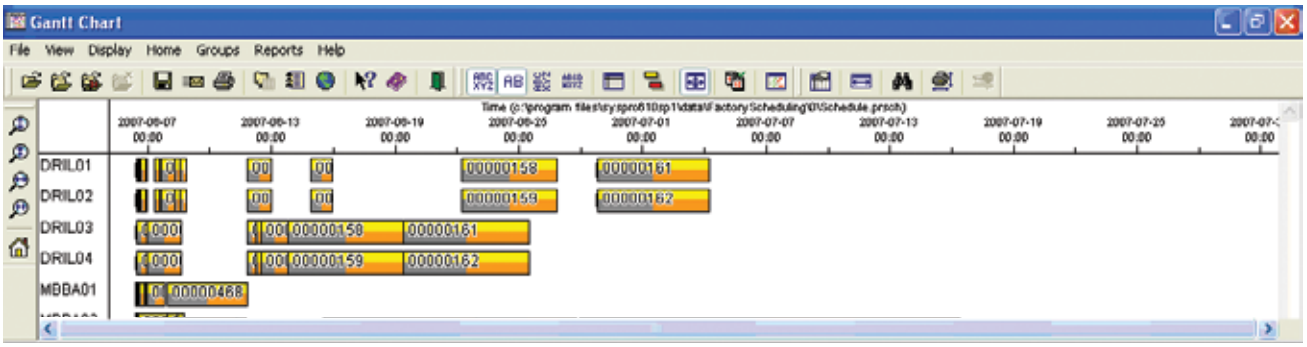
The **Graphical Planning Board** is a basic finite capacity scheduler with basic rules and features for automatic scheduling:

- Forward/Backward and bi-directional sequencing
- Order loading by due date, priority or 'first come, first served'
- Load orders based on product or operation attributes (e.g. color, customer etc)
- Orders to be completed late are highlighted
- Drag-and-drop editing of operations
- Highlight operation flow of orders
- Finite or infinite capacity resources
- Color coding on Gantt chart by product class and order status
- User-definable calendars, resources states and efficiencies, breakdown, planned maintenance
- Automatic machine selection within work center
- Allow only manual sequencing on selected machines
- Easy identification and highlighting of order and operations
- Resource utilization display
- Ability to save multiple schedules and compare using the comparative views.

II. Finite Scheduler

The **SYSPRO Finite Scheduler** product contains more sophisticated features to schedule your factory. You are able to model your factory more accurately using features such as transfer batches, sequence dependent setup times, preferred resource selections, maximum operation spans, maximum delay between operations, etc.

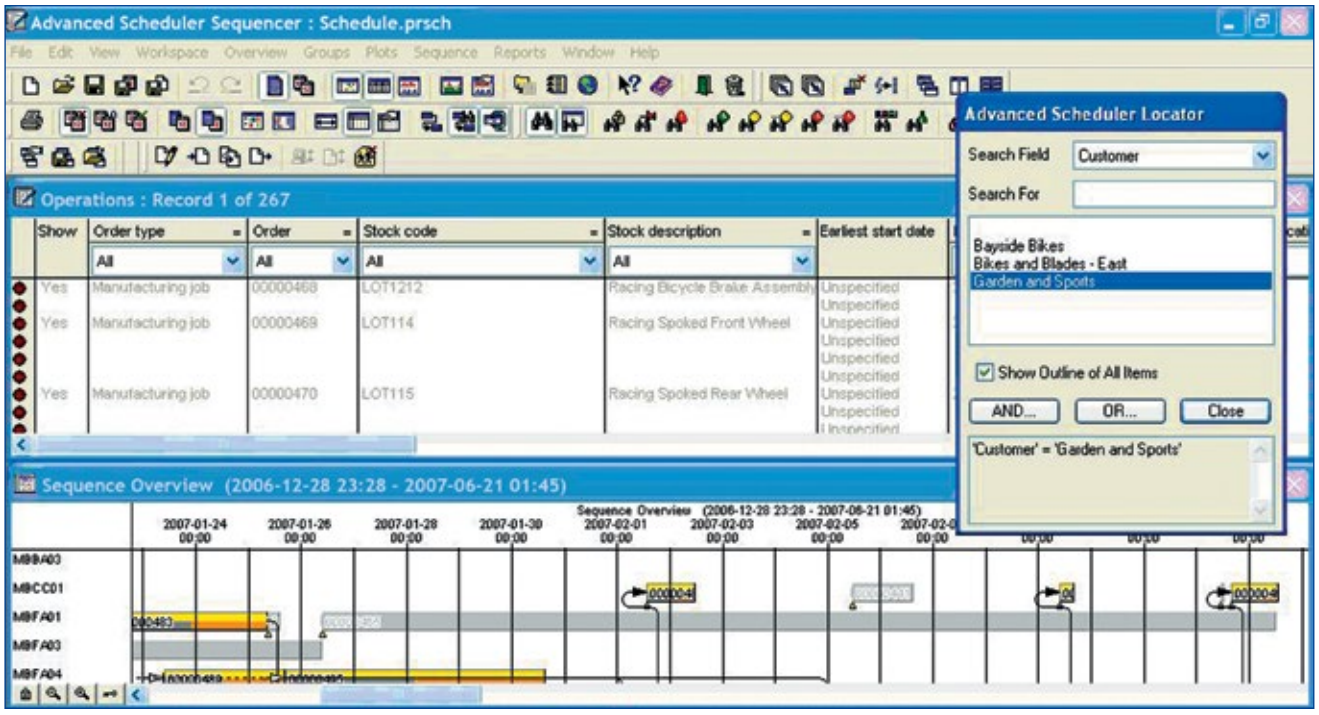
- Multiple constraints can be considered per operation
- Furnace type resources using match properties for infinite capacity resources
- Maximum operation make span
- Jobs on hold
- Sequence dependent changeover times
- Transfer quantities between operations (transfer batches)
- Automatic schedule repair
- Subsequent operation machine selection based on current operation machine selected
- Relative efficiencies between machines in a work center
- Preferred resource selection
- Slack time between operations
- Mid-batch updates and progress indicator
- Schedule analysis reports.



III. Advanced Scheduler

The **SYSPRO Advanced Scheduler** product allows you to generate schedules of a high quality in complex environments through the use of advanced scheduling rules and by considering the availability of components and raw materials. You can define your own complex scheduling rules using filters, a combination of standard and/or defined advanced rules, user defined scripts etc. Jobs on different BOM levels and stock on hand is pegged based on definable rules, thereby ensuring a feasible schedule.

- Automatic allocation (pegging) of orders on different BOM levels and to materials or components. User definable pegging rules can be used
- Linking of parent and sub jobs (locked pegging)
- Schedule despite shortages option
- Parallel loading scheduling algorithms
- Preferred sequence rules based on user definable attributes
- Advanced algorithmic rules e.g. Minimize WIP, Selective Bottleneck (TOC) etc.
- Building of custom scheduling rules.



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