

From Scheduling to Planning
for complete APS solution



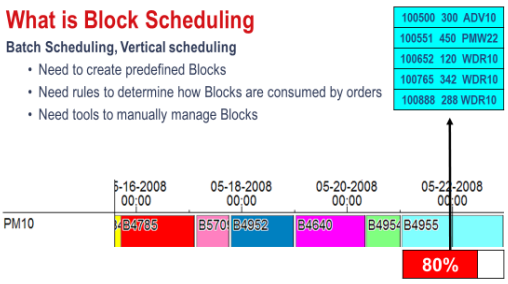
Block Scheduler - scheduling orders into blocks

Fulfilling customer orders. Cost and efficiency management.

The world economy is dealing with a situation of increasingly intense changes. The condition for successful management of changes in a production company is the ability to create a workable plan, and the company's processes must be able to make systematic, smart and quick reactions. This is true for many companies, which due to easy-to-understand rationality in individual production steps combine orders into blocks. This also applies to companies that produce in typical batches and want a fast material flow. Block Scheduler is designed for both types of companies.

Vertical Scheduling

The traditional scheduling to limited resource capacities, as we know it from Preactor, is horizontal. The main purpose of the Block Scheduler is to allow the creation and manipulation of a vertical schedule over a traditional horizontal schedule of operations. This gives us control over occupancy and the schedule of orders in an individual operation - block.



Vertical scheduling can be compared to airline seat reservations. Each order (group of passengers) is arranged in one block (aircraft), in certain types and seats, depending on the rules. Before and after the joint operation (flight), orders (passengers) go their own (technological) route.

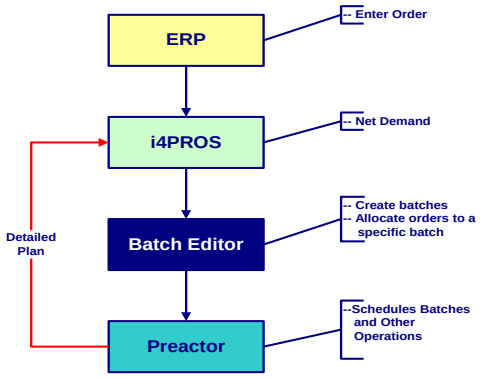
Block Scheduler

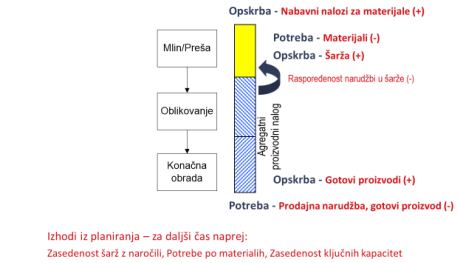
Block Scheduler, an add-on for Preactor APS, was developed by Lean Scheduling International.

Design of a solution that includes a Block Scheduler

A typical solution brings four key capabilities:

- Create and schedule blocks
- Vertical scheduling of orders into blocks
- Edit content in blocks
- Scheduling of the remaining operations





Typical questions for Block Scheduler

Long-term / global plan: order confirmation, batch occupancy with orders, material procurement, occupancy of key capacities.

Short-term / detailed schedule: cutting operations, scheduling of available stocks of semi-finished products.

Who schedule orders into batches?

Laminates for printed circuit boards
Polyclad Example: The set production rules specify exactly how products should be mixed in a single press stack, and the business rules define which customers have access to capacities with rapid response.

Decorative laminates
Nevamar example: The schedule on a press is based on a complex set of rules that determine which products can be in a single press stack at the same time. Variants include characteristics such as plate dimensions, surface treatment, composition, grade, product type, limitations of the press itself, and customer requirements.

Steel
Acroni Example: Steel batches are planned for a long time in advance, so a good overview of the unscheduled proportions of planned batches is required. Fast material flow is enabled by inspecting the free stocks of steel semi-finished products.

Paper
Thilmany example: The sales department can inquire about available capacities on its own and, based on this, suggest possible delivery times during a telephone conversation with the customer.

Vertical scheduling rules

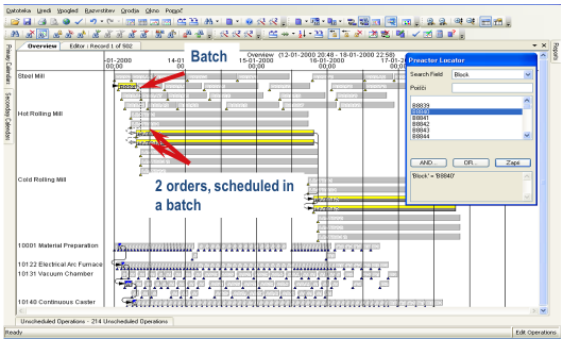
- Block capacity rule
- Time / date rule
- Type rule - for one or more attributes

Soft and hard rules

Block Scheduler allows you to define soft scheduling rules. Hard rules consider the automaticity of vertical scheduling in blocks. Soft rules can be knowingly violated by the operator in pre-set frames. Example of a soft rule: selection of an alternative quality material

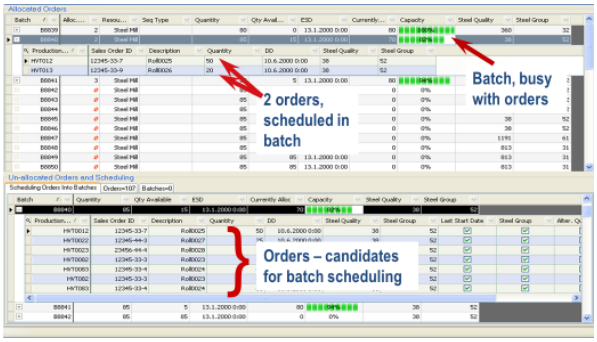
Production master plan

The picture shows an example of a Gantt chart of a master (global) production plan in which is located a batch with scheduled orders.



Review and manual block editing

The picture shows the user interface of a batch editor example with lists of scheduled batches and orders-candidates for scheduling. The occupancy of the batches with orders is graphically shown with green colour. The batch editor allows manual scheduling, including breaking of soft rules.



Contact details and additional information

For more information on Block Scheduler tools and APS solutions, contact:



Mihael Krošl
director
mkrosl@lean-scheduling.eu



Blaž Svilan
technical director
bsvilan@lean-scheduling.eu



Eva L. Gabrijel
APS Business Development & Consulting
evalg@lean-scheduling.eu







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