

# Advanced Planning and Scheduling for SYSPRO

K3 Syspro Advanced Planning and Scheduling (APS) solution gives you the ability to plan and schedule the production in your factory to a detailed level taking into consideration the constraints in your environment. APS enhances existing manufacturing capabilities by effectively closing the loop between ERP business functions and the shop floor, while giving managers useful, real-time information on current shop floor activities.

APS enables improved customer service levels through greater responsiveness. If you operate in a Make to Order environment, there will inevitably come a day when a customer asks: "How is my order coming along?", or "Are you still on target to deliver next week?" If the delivery is dependent upon live Jobs and you don't have live feedback, answering these questions is very difficult. APS provides live details of how Jobs (and their related Sales Orders) are progressing. APS can seek the earliest possible achievable delivery date. This functionality can be used proactively as well, allowing problems to be identified earlier, and customers to be warned in advance, before they feel the need to call to chase a delivery.

## The benefits of Advanced Planning and Scheduling

- Improved customer service levels through greater responsiveness:
  - An achievable delivery date can be calculated as close to the customer requested date but without placing impossible demands upon either the purchasing department or the manufacturing plant. This is called "Capable to Promise"
  - If a customer's requirement changes, the entire set of work orders related to a sales order can be re-planned
  - Keeping your customers informed – if production or purchasing problems delay the expected work order completion date, the effect on the sales order line is visible immediately
- A multi-level sales order line can be planned as a coordinated set of works orders
- Real-time information on current shop floor activities with Clear visibility of planned capacity utilisation

Planned Start	Planned M/C	Works Order	Op No	Split No	Qty	Part Number
01/05/2012 09:43	MBBA03	00000450	1	0	5	LOT1212
01/05/2012 09:43	MBFA02	00000405	1	0	1	B113
01/05/2012 09:43	MBBA02	00000406	1	0	1	B1212
01/05/2012 09:43	MBFA04	00000154	1	0	100	LOT113
01/05/2012 09:43	DIG-MC	00000164	1	0	1	Construction
01/05/2012 09:49	DRIL03	00000511	1	0	5	LOT114

Machine	User Id	Works Order	Op No	Split No	Plan Quantity	Qty Left
MBFA01	2	00000506	1	0	6.0	6.0
		00000448	2	0	5.0	3.0
TLCC01		00000509	1	0	5.0	5.0
DRIL03		00000155	1	0	100.0	100.0
DRIL04	3	00000440	1	0	50.0	50.0
DRIL01	4	00000512	1	0	5.0	5.0

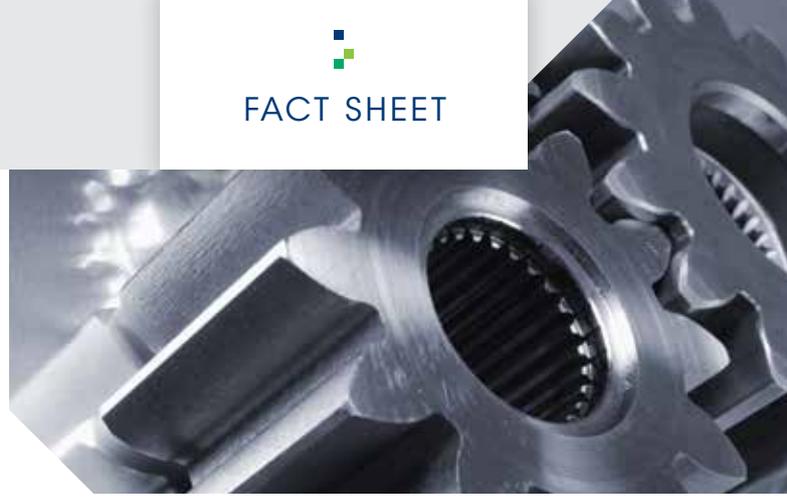
APS(0) - Shop Floor Data Capture

File View Options Help

TLCC01 00000508/1	DRIL02 00000512/1	DRIL04 00000445/1
DRIL01	DRIL03 00000155/1	WELD01 Idle - between jobs



# Advanced Planning and Scheduling for SYSPRO



## Advanced Planning and Scheduling features

- A live capacity plan, providing constant visibility of available capacity at each work centre
- New Sales Orders can then trigger a check for capacity:
  - At the Work Centres involved
  - On the required dates
  - Without overloading
- APS maintains several dates for analysis:
  - Customer Requested Date
  - Planned Delivery Date (as told to customer after SOP)
  - Scheduled Completion Date (after Optimisation)
  - Actual Completion Date (from SFDC)
- APS can seek the earliest possible achievable delivery date
  - APS can consider raw material availability and lead times, adding time to procure as needed
  - The available capacity is updated in real-time as new demand is planned
  - This means that the response to customers is always based upon feasible dates
  - This is performed for each Sales Order Item, assessing:
    - What quantity of each item is required
    - What stock is available
    - If insufficient stock is available then:
      - How long to make/buy
  - These calculations are based upon:
    - The ordered quantities at all BoM levels
    - The current available capacity at all visited Work Centres
  - Multilingual support per user
- Sophisticated Attribute based Job Sequencing facilities which are grouped into 'Methods.' Methods are selected for each area of the factory, supporting cellular manufacturing:
  - A machine shop may require sequencing by Material type or Size
  - A Paint Shop would be better sequenced by colour (pale to dark)
  - A Kiln or Oven might need sequencing by temperature
- Changeover times that can be adjusted automatically within the APS Finite Scheduler. This adjustment can be basic, or a more detailed, matrix of changeover times for each pair of values of the attribute, can be set
- A finite scheduling function to allocate work:
  - This recognises the availability and relative efficiency of resources (machines, people, skills, tools, jigs, etc.) according to the shift patterns they follow
  - It also recognises periods of planned maintenance, plant closure, holidays, etc.
  - It can take into account material supply constraints and derives a list of supply issues
  - It applies setup optimisation rules
  - It will recognise requests to fix jobs to a specific machine and time
  - It can split jobs across multiple machines; manual splitting is also supported
  - It can group jobs with similar attributes for concurrent or sequential execution, for example filling a furnace with jobs requiring the same temperature

