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ILOG® has unveiled ILOG Plant PowerOps(TM) 3.0, the latest version of ILOG's integrated planning and scheduling solution that increases production planners' ability to generate feasible and optimal plans and better control demand and manufacturing variability through industry-first features like a material rebalancing engine and improved rescheduling capabilities.

The new ILOG Plant PowerOps (PPO) also features multidimensional product and time-aggregation capabilities that enable planners to better analyze and manage complex manufacturing environments that requires the consideration of multiple product characteristics. ILOG PPO is now part of the ILOG LogicTools Supply Chain Applications Suite and is supported by a global team of manufacturing and supply chain professionals.

Today's competitive business dynamics force manufacturing companies to improve production efficiency and service levels, increase flexibility, accept smaller order sizes, and introduce new products at faster rates than ever before. Most advanced planning and scheduling (APS) software packages on the market, whether part of Enterprise Resource Planning (ERP) or Supply Chain Management (SCM) systems or standalone, can only manage simple production processes. The limitations in their ability to address the key manufacturing constraints generate unrealistic schedules, high manufacturing costs and poor inventory coverage and service levels.

Leveraging investments in existing ERP, SCM and/or Manufacturing Execution systems (MES), ILOG PPO targets Food and Beverage, Pharmaceuticals and Chemicals and extends the value of existing IT investments by providing dramatic improvements in production efficiency and flexibility without an expensive system replacement project.

New features in ILOG PPO 3.0 developed in real-world manufacturing settings in the process industries areas include an industry-first material rebalancing engine that helps planners align manufacturing with demand. It accomplishes this by re-optimizing the production quantities and batch sizes of a given schedule, which improves the synchronization of plans between intermediate products and finished products and between finished products and stock coverage requirements.

The material rebalancing engine can also change the production quantities of finished products for a given (fixed) schedule of intermediate products. Therefore

planners are able to postpone decisions on the finished products (i.e. packaging) to better cope with demand variability issues.

In addition to this new rebalancing capability, other key new features include:

- Rescheduling capability that enables dynamic re-pegging during manual rescheduling and more powerful tools to help planners change a schedule without violating constraints.
- Multidimensional product and time aggregation. This feature enables planners to analyze the results of planning based on several dimensions defined by product families. For example, it enables planners to analyze stock coverage on products aggregated by packaging format or flavor when most of the existing solutions on the market are restricted to only one dimension (i.e. product belongs to one family).
- The ability to support different planning and scheduling business processes (i.e. plan finish products before intermediates or vice versa) which is also a unique feature on the market.

Bridging the gap between ERP and MES systems, ILOG PPO is the key element to improve companies' flexibility and real-time responsiveness.

ILOG PPO's ability to take into account plant floor constraints such as tanks, cleaning policies and sequence dependent changeovers is key to generate reliable plans. Using the scenario management interface, supply chain executives and operations managers can simulate alternatives, compare them across key manufacturing metrics, and make the recommendations that lead to efficient meeting business objectives.

With ILOG PPO, production planners and plant schedulers are empowered with a true decision-support system that enables them to modify the generated plan, validate the manually modified solution with sophisticated alerts and explanations. Industries characterized by high product mix shared equipments, physical batching constraints and high regulatory compliance constraints will gain the highest benefits from the sophisticated planning and scheduling capabilities of ILOG PPO.

Efficiency gains include reduction of waste and manufacturing costs, better management of variability, improved synchronization between manufacturing execution and supply chain plans, as well as improved throughputs and reduction of planning and scheduling cycle time.