

# Factory Planning & Scheduling

For all manufacturers, MTS, MTO, ETO or BTO etc., it's critical to properly allocate the limited material and capacity resources and deliver on time. That means prioritizing work orders and sequencing the schedule for optimal throughput of the factory. And when changes arise — such as rush orders, unplanned maintenance, or other disruptions — Respond fast by automatically recalibrating and re-synchronizing the production flows. Without a proper planning and scheduling solution, you face high WIP, heavy overtime levels, idle labor, expediting and unnecessary bottlenecks.

Adexa factory planning solution enables companies to reduce cycle times and lead times and keep the operations running smoothly. Most importantly it ensures on-time delivery of goods in the face of unforeseen disruptions such as equipment breakdowns, labor shortages or late material arrivals.

**The first step in generating accurate plans is to have accurate models, i.e. a true digital twin.** Adexa's deep modeling capability allows the most granular details to be represented so that decisions made by the system are executable without manual intervention.

## Adexa solution for Factory Planning & Scheduling

The Adexa offers the industry's best solution for creating constraint-based planning that optimizes your plant-level production plans and continuously synchronizes them with changing supply and demand factors in real-time. That means greater reliability and feasibility of production schedules in the face of uncertainty and potential disruptions. The Adexa solution automatically:

- Optimizes resource utilization,
- Reduces manufacturing cycle times,
- Improves production processes,
- Responds to disruptions and breakdowns,
- Ensures reliable delivery times,
- Responds to delays from suppliers,
- Real-time connectivity to MES allows fast response to events,
- Adexa Genies® monitors and self-corrects both the model and plan progress,
- Learns to predict potential issues with resources and material availability,
- Predicts availability of resources and supplies

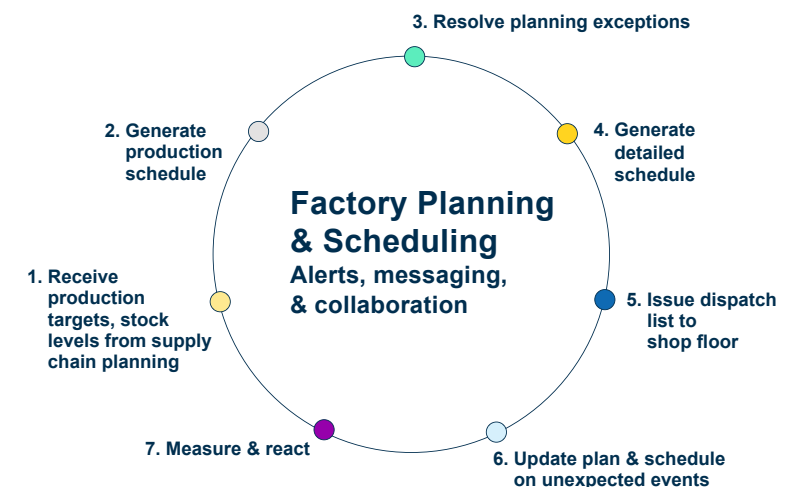
## Benefits of Adexa Factory Planning & Scheduling

Adexa factory planning and scheduling solution, driven by accurate and reliable plant scheduling, improves your on-time delivery to almost 100% and minimizes cycle times while improving asset utilization. It enables you to create a true digital twin.

### Stochastic Planning

Equipment efficiencies, throughput, supplier delivery behavior and other resources are subject to change based on seasonality, demand quantities and mix of products. Adexa Genies® are continuously sensing these changes and re-adjusting the model using machine learning and pattern recognition algorithms. Using these techniques, we can predict the likelihood of equipment availability and order arrival patterns to self-improve and self-correct. Tangible benefits achieved include:

- Improved equipment and resource utilization
- Reduced WIP drastically to respond faster
- Reduced use of overtime & change-over times
- Re-routed products for cost or availability optimization
- Automated re-sequencing dynamically based on new information
- Real-time connectivity with MES and ERP systems
- Eliminated idle labor and bottlenecks
- Minimized the high cost of downtime from unplanned machine stoppages



### Real Bottom-Line Benefits

Adexa delivers solutions that synchronize financial/operations planning (S&OP) and execution (S&OE) in ONE unified model. In your journey to autonomous planning we create a supply chain digital twin that performs both planning & execution as more data is added. No need to acquire additional systems with disjointed data models and additional data bases. Adexa truly merges planning and execution.

Adexa Factory Planning & Scheduling system is a more detailed and complete model of Adexa S&OP.

