

The background image shows two men in dark blue suits and ties standing on a modern building's exterior walkway. The man on the left is holding a tablet, and both are looking at it. A semi-transparent CAD software interface is overlaid on the left side of the image, showing a 3D wireframe model of an industrial structure with a cylindrical tank and a lattice tower. The interface includes a toolbar at the top and a list of features on the left. The entire scene is overlaid with a pattern of glowing blue circles of varying sizes.

**SIEMENS**

*Ingenuity for life*

A series of five icons representing different aspects of PLM software: a 3D cube, a gear with a checkmark, a circular flow diagram with three arrows, two interlocking cubes labeled 'abc' and 'xyz', and a circular arrow indicating a cycle.

Siemens PLM Software

# SIMATIC IT Preactor APS

Advanced planning and  
scheduling

[siemens.com/mom](http://siemens.com/mom)



# Enhancing the synchronization of your manufacturing processes

## Leading advanced planning and scheduling software.

SIMATIC IT Preactor APS is a family of production planning and scheduling software products that improve the synchronization of your manufacturing processes, giving you greater visibility and control to increase utilization and on-time delivery, while reducing inventory levels and waste. SIMATIC IT Preactor APS is a highly customizable capacity planning and scheduling package.

### Key benefits achieved with SIMATIC IT Preactor APS

- Better forward visibility of production
- Improved utilization and efficiency
- Reduction of inventory and work-in-progress (WIP)
- Easier impact analysis and change management
- Better customer service

### A strategic investment

Manufacturers must react quickly and intelligently to unexpected changes, while being able to respond to shorter lead times and satisfy customer demands. SIMATIC IT Preactor APS products have been specifically developed to meet this need, using advanced algorithms that balance demand and capacity to generate achievable production schedules.

### What about my existing software?

SIMATIC IT Preactor APS products are designed to work alongside and facilitate, rather than replace, existing systems. They can be tightly integrated with enterprise resource planning (ERP), manufacturing execution system (MES), accounting and forecasting software, shop floor data collection and spreadsheets.

### A complete family of products

SIMATIC IT Preactor APS is not a single point solution. It is a family of products that have different levels of functionality and pricing so you can select the system that satisfies both your needs and budget. Upgrading to another product as your needs change is simple and easy.

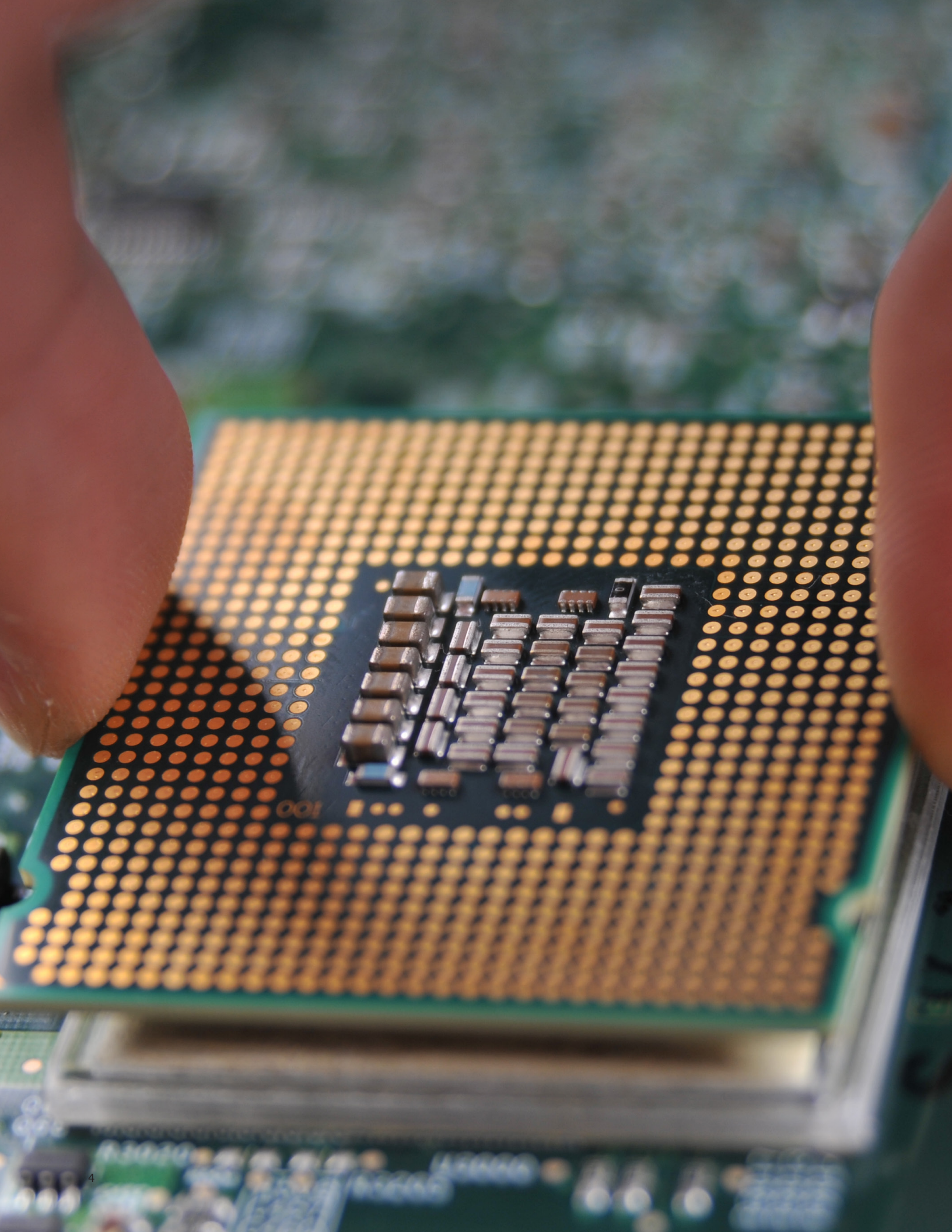
Products from the SIMATIC IT Preactor APS range can be used for long-term strategic planning covering months and years ahead, medium-term tactical planning with a few weeks planning horizon and for detailed sequencing and scheduling.



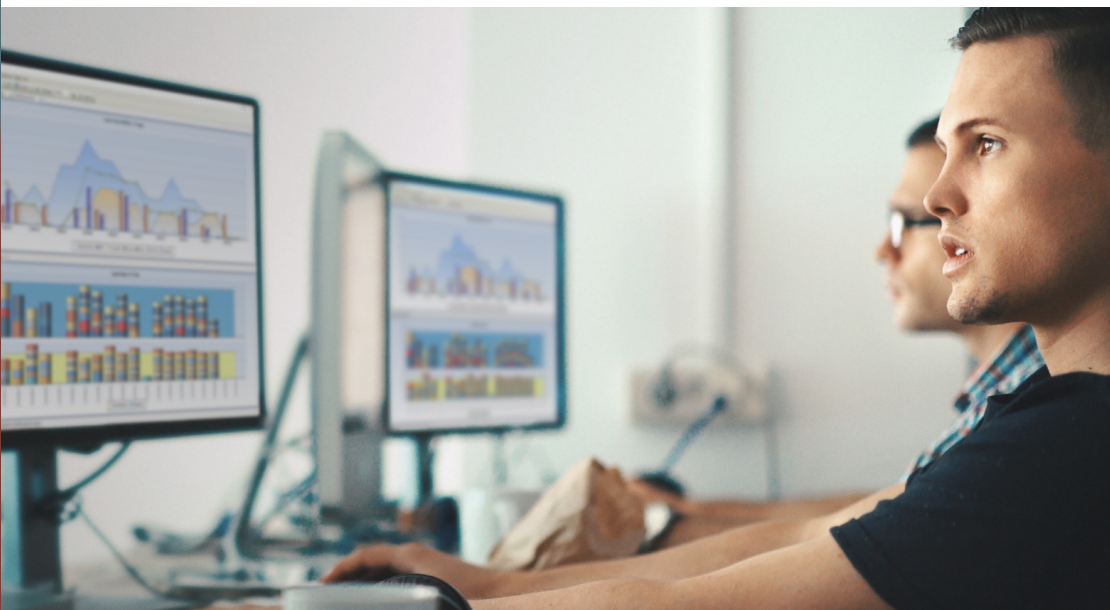












#### Complete customization

SIMATIC IT Preactor APS can be installed straight out of the box for immediate benefits, but can also be customized and configured to meet a company's planning and scheduling needs no matter what they are.

#### Fully interactive

Products in the SIMATIC IT Preactor APS range provide the interactivity that modern businesses need in order to react efficiently to unexpected changes in demand and capacity and thereby maximize on-time deliveries.

#### Visibility is key

You need to see the impact of your decisions. This cannot be achieved with more generalized tools, such as a spreadsheet. SIMATIC IT Preactor APS helps you visualize the current load, see the impact of unexpected events, ask what-if questions and compare alternatives, all before the decision is made.

#### Who uses SIMATIC IT Preactor APS?

Many companies, ranging from small and medium-sized businesses to large corporations, employ SIMATIC IT Preactor APS as part of their global supply chain solution. These companies are located around the world. The software's flexibility means that it is used by companies in almost every sector of manufacturing, services and logistics.

- Automotive and aerospace
- Chemicals and pharmaceuticals
- Electronics and electrical equipment
- Food and beverage
- Furniture and wood products
- Glass and ceramics
- Machinery and precision engineering
- Metals and metal fabricated products
- Oil and gas
- Packaging, printing and publishing
- Rubber and plastics
- Textiles and apparel
- Transport and logistics

#### Worldwide expertise

SIMATIC IT Preactor APS is sold, implemented and supported by a network of accredited partners and solution providers. No matter where you are located you will find expertise to make sure SIMATIC IT Preactor APS is a fit for your needs.

# SIMATIC IT Preactor advanced planning

SIMATIC IT Preactor AP is a strategic decision support tool that combines forecast and long-term orders that target stock levels and bucketed resource capacities to ensure that future demand is met. It is an essential planning tool for companies that want to enhance competitiveness, increase profits and improve customer service. Effective purchasing of economic quantities of raw materials and timely use of this raw material is key to reducing one of the greatest production problems – unnecessarily high stock levels of both finished product and raw material and the possibility of this stock reaching its sell-by date before being consumed.

Planning can be executed in finite or infinite capacity mode and planning time periods can be days, weeks, months or a combination of all three. Parameters can be set against each item code, which allows different calculations for each item. For example, some products may be in make-to-stock mode while others are in make-to-order mode.

If used together with a SIMATIC IT Preactor scheduling system, detailed production schedule information can be sent back to the planning system and this will override planned volume with scheduled volume. The master production schedule (MPS) can then be recalculated using the production schedule as the base for new results.

## **SIMATIC IT Preactor advanced planning benefits**

- Decision support for long-term strategy
- Production load balancing and smoothing
- Rapid master production schedule generation
- Ability to respond quickly to changes in demand



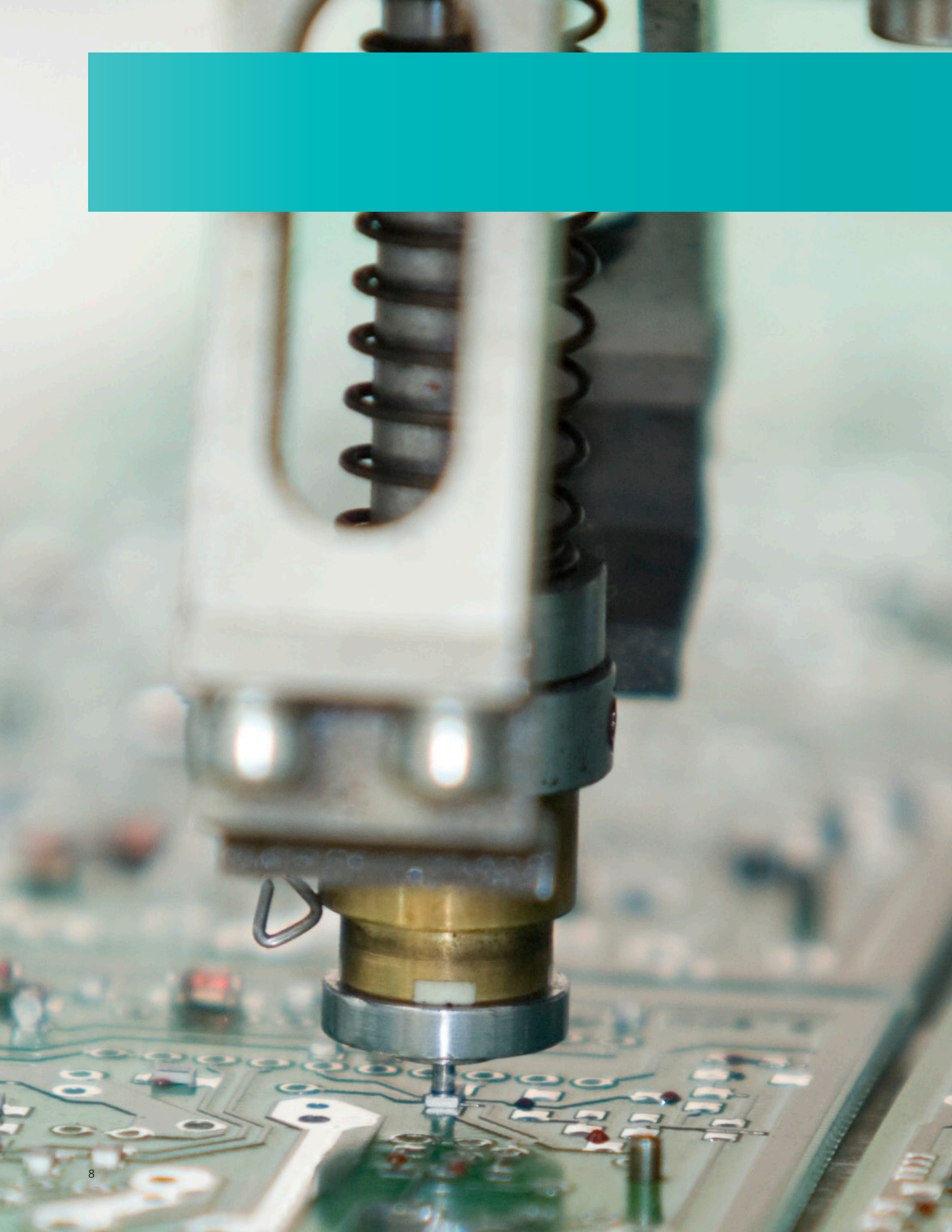


A man wearing a blue button-down shirt and an orange hard hat is looking down at a laptop. He is in a warehouse or industrial setting, with large stacks of white and brown materials (possibly cardboard or insulation) visible in the background. The scene is lit with warm, industrial lighting. A solid blue rectangular box is overlaid on the top left of the image, and a larger blue box is overlaid on the bottom right, containing text.

## What's the difference between planning and scheduling?

The basic difference between planning software and scheduling software is that planning systems are bucketed (monthly, weekly, daily) and cannot preserve operation sequences within the time bucket. True scheduling systems are bucketless, preserving sequencing, and capable of generating work-to or dispatch lists. Assigning an operation to a resource is a key function for achieving operational efficiency and optimizing performance. Detailed scheduling uses a shorter time horizon and a much more detailed process route than a planning system.







# SIMATIC IT Preactor advanced scheduling

SIMATIC IT Preactor AS is a finite capacity scheduling tool based on a detailed model of the plant. It takes into account the actual availability of resources and considers multiple constraints to produce an achievable schedule. It is a scheduling tool primarily for manufacturers that need to schedule machines, production lines and resources, but is also used in services and logistics.

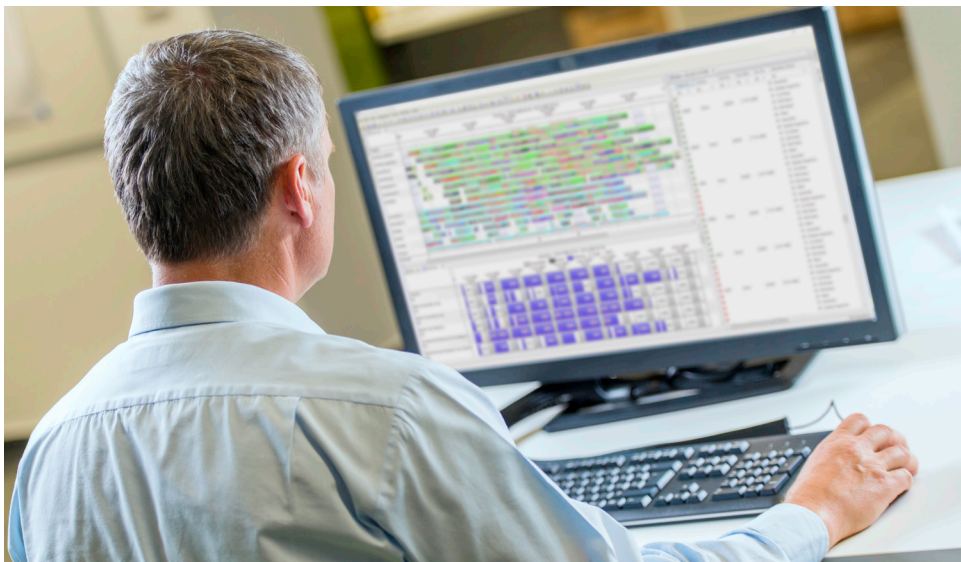
The purpose of scheduling in manufacturing is to minimize production time and costs by telling a production facility what to make, when to make it, and what staff and equipment to use. Production scheduling aims to maximize the efficiency of the operation and reduce costs. Detailed scheduling software is an important tool for many companies because it can have a major impact on the productivity of a process.

Typically, the input is manufacturing orders that have a process route associated with each one, defining the operational steps to make the product. The user then can load the orders onto

individual resources using scheduling rules and interacting with the schedule using the Gantt charts and generated plots. A typical output would be a dispatch list for each resource.

## **SIMATIC IT Preactor advanced scheduling benefits**

- Better resource utilization
- Reduction of setup and changeovers
- Reduction of inventory and work-in-progress
- Detailed visibility of the production load
- Faster what-if scenario modeling
- Improved on-time delivery





# Realizing innovation in the digital enterprise

## With the manufacturing operations management (MOM) software portfolio from Siemens PLM Software

Siemens now offers a holistic automation solution covering all major Industry 4.0 requirements, and Siemens PLM Software delivers software to support the Digital Enterprise.

Manufacturers are better equipped to initiate or respond to disruptive innovation trends when their processes are fully digitalized.

Digitalization transforms the innovation process into a proactive agent in driving new business opportunities, enabling manufacturers to weave a digital thread through three distinct phases:

**Ideation**, the traditional area of product concept and design

**Realization**, including production planning, production engineering, factory automation and production execution systems

**Utilization**, the service and support of products in the field and the feedback loop from these products to the other domains

Siemens PLM Software solutions smoothly connect major parts of the product and production life cycle. Powerful product lifecycle management (PLM) software enables the development and optimization of new products on an entirely virtual basis. In the real manufacturing world, the concept of totally integrated automation (TIA) ensures the efficient interoperability of all automation components.

To digitally transform the realization phase, Siemens provides a complete portfolio of solutions for manufacturing operations management (MOM), bridging PLM and automation domains and enabling customers to implement strategies for the complete digitalization and integration of their product and production lifecycles.







### About Siemens PLM Software

Siemens PLM Software, a business unit of the Siemens Digital Factory Division, is a leading global provider of software solutions to drive the digital transformation of industry, creating new opportunities for manufacturers to realize innovation. With headquarters in Plano, Texas, and over 140,000 customers worldwide, Siemens PLM Software works with companies of all sizes to transform the way ideas come to life, the way products are realized, and the way products and assets in operation are used and understood. For more information on Siemens PLM Software products and services, visit [www.siemens.com/plm](http://www.siemens.com/plm).

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