


OPTIMIZATION IN COMPLEXITY

Production processes – and their scheduling – have become more complicated. Technological innovations have increased product complexity and fueled consumer demand for customization. You need a solution that's at its best when processes are at their most complex. You need a solution that thrives in a complex environment to give you the agility, precision and efficiency you need to fulfill diverse orders on time and maximize your profits.



Shifting bottlenecks, strict sequential processing requirements, forecast volatility and looming material expiry dates are just some of the factors that complicate your process scheduling. Then there are disruptions on the day of operations: A new order with an expedited delivery deadline is pushed into the backlog, a machine breaks down and a shortage of resources halts a key stage of production.

Within this web of complexity, you seek simplicity. You need a scheduling platform that supports your planners in building schedules that are as flexible as they are exacting. This enables them to:

- Create schedules that work and make the most of bottleneck resources
- Minimize the effect of machine downtime on scheduled tasks and KPIs
- Rapidly adjust when disruptions occur (e.g. resource shortages or incoming rush orders)
- Identify and correct material shortages quickly to minimize impact on the schedule

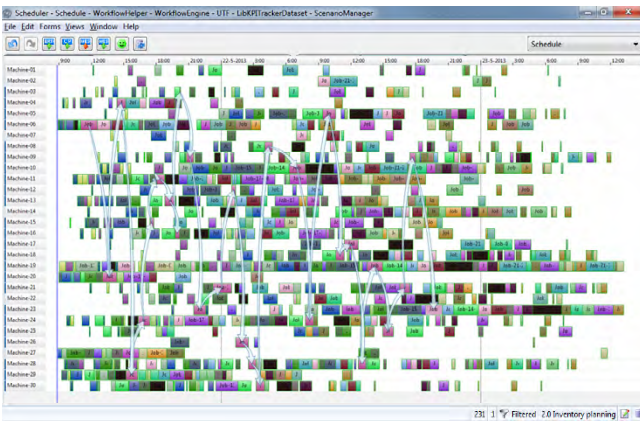
Good planning decisions increase productivity and profitability. Are your planners empowered to make the right ones?

Optimized scheduling for productivity, performance and profit

Production processes and material flows that are bound by strict constraints need a system that is solid enough to handle multiple restrictions, yet agile enough to adapt in the face of disruptions. DELMIA Quintiq Scheduler helps your planners visualize different production scenarios to create an optimized, demand-driven schedule, no matter how complex or rigid the production parameters. It supports them with:

Optimized scheduling

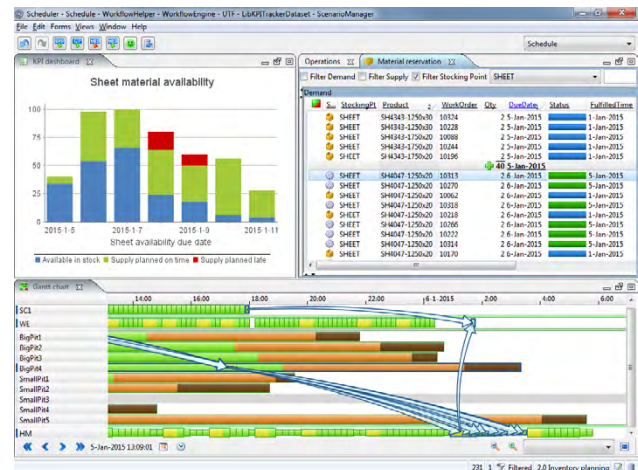
Scheduling work orders on the right resource and in the right sequence is key to reducing setup and change-over costs in production. DELMIA Quintiq Scheduler optimizes the scheduling process to alleviate bottleneck resources and improve production bottom line while ensuring that every order is completed on time. It doesn't stop there: Frequent re-optimization enables you to respond to the latest events while partial optimization allows you to avoid changing the entire plan in case of re-optimization.



DELMIA Quintiq optimization in action

Material allocation

With Scheduler, you can match customer orders to raw materials and optimize material allocation. While scheduling your production line, you can easily view the availability of materials and decide whether to use existing stock or order new supplies.



Material allocation in DELMIA Quintiq Scheduler

Smart batching

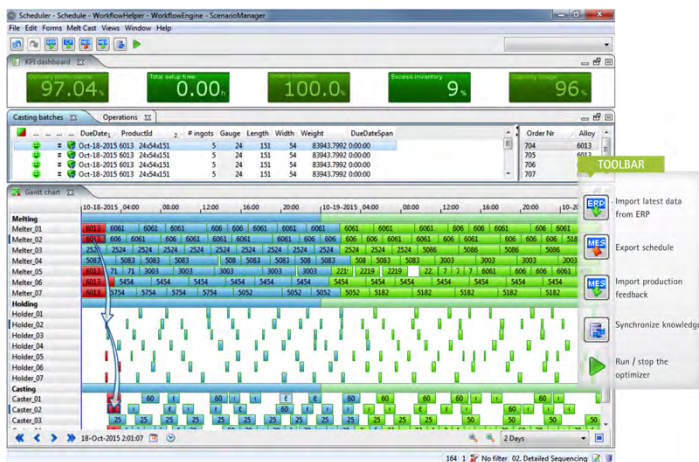
Customer orders rarely match optimal production specifications. The right order combination optimizes material usage and reduces waste. The solution's smart batching capability allows planners to combine orders in a way that incurs the least waste and cost while maintaining the highest level of production efficiency. By streamlining batch processes and making them more efficient, you can expect to see lower costs, higher productivity and optimal yield.

KPI monitoring

Want to keep track of your KPIs? Scheduler tracks a range of KPIs in real time, including delivery performance, production lead time, inventory levels and throughput. Your planners can analyze the impact of a single planning decision or the aggregate effects of decisions made on delivery performance, inventory levels and productivity. They can do this at any point in the daily planning and scheduling process.

Seamless data integration

Data on orders, available resources and scheduled disruptions are imported into Quintiq Scheduler. Updates to the data are reflected in the solution as well. This ensures that information is at its most accurate and complete before a schedule is executed on the shop floor.



ERP/MES integration at your fingertips, with clear view of KPIs

Integration between different planning levels

To reach your business goals, your plans need to be aligned at every level. Scheduler's integration capabilities allow you to align your operations planning with higher level plans. The result? Stricter compliance with the targets set by management, which leads to better capacity utilization, more efficient operations and better KPI fulfillment.

Views on what-if scenarios

The what-if scenario planning capability in Scheduler provides you with powerful decision support. It allows you to evaluate alternative production schedules, examine the impact of each scenario against various KPIs (e.g. delivery time or resource utilization) and select the best course of action to achieve your goals.

Capacity overview

End-to-end visibility enables your planners to monitor resource capacity requirements in advance every day without having to schedule every order. They can spot resource bottlenecks immediately and take action to mitigate issues before it is too late. They can also adjust the schedules as needed in the event of a resource shortage or an incoming rush order.

Effective inventory management

Inventory management is crucial in preventing waste, honoring commitments and maximizing revenue. Scheduler's built-in inventory KPIs give you full control over your inventory levels, allowing you to minimize inventory or maintain a desired stock level, depending on your goals.

Campaign scheduling

Good campaign support enables you to strike the right balance between bigger production campaigns that maximize productivity and smaller campaigns that emphasize agility. Scheduler allows your planners to automatically create and adapt campaigns based on groups of similar tasks. The time taken for manual planning and the margin for error are reduced.

Immediate calculations on consequences of planning decisions

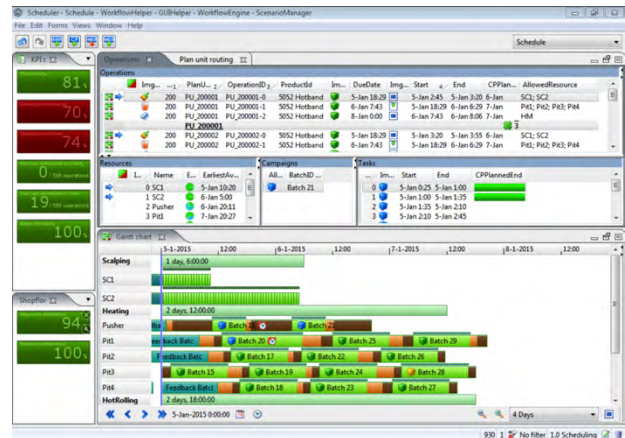
Scheduler automatically calculates the consequences of the planning decisions your planners make, giving them the visibility they need to further refine the schedule with their expert knowledge and judgment. This view of the impact of their decisions helps them verify if they have made the right call or if they need to make adjustments to meet KPIs.

Decision support

Scheduler helps your planners build optimized schedules; it does not replace people. Tasks are automated, but room is always reserved for human judgment and intervention. Spared from manual planning, planners can see the bigger picture and invest more time in what truly matters – making smarter decisions.

User-friendly interface

The solution's interface is functional, intuitive and easy to use. Users can configure views and menus to their own processes to see the data most useful to them at the level of detail that they need. This enables them to plan and execute efficient sequences.



Clear decision support in a user-friendly interface

DELMIA Quintiq Scheduler in action

How can a single solution solve scheduling puzzles in multiple industries? DELMIA Quintiq configures solutions like Scheduler to fit the specific needs of your business, no matter what industry you are in. Here are three examples:

Steel

DELMIA Quintiq Scheduler empowers steel producers to increase the amount of slabs that can be hot charged into re-heating furnaces before hot rolling. Integrated scheduling helps minimize the time from casting to rolling, thereby saving re-heating energy costs, shortening lead times and lowering slab stock levels. The result? Increased product quality, higher on-time in-full delivery levels and reduced operational costs, leading to better customer satisfaction and higher revenue.

Liquid chemicals

Liquid chemical production processes are complex, with many different constraints related to storage and production tanks, connecting pipes, production batches and cleaning requirements. Creating schedules without

taking all the relevant rules into account leads to suboptimal results, lower throughput and smaller profits. DELMIA Quintiq Scheduler can support all of the constraints inherent in the industry, enabling liquid chemical producers to optimize utilization of their production resources.

Manufacturing

The convergence of many material streams of components and sub-assemblies come together in the final assembly of a complex product. Every component and process affects each other, making scheduling efforts particularly complex. If an assembly process is delayed, specific components – for example, engines for automobiles or printed circuit boards for electronics – might be completed but have nowhere to go. DELMIA Quintiq Scheduler enables manufacturers to combine the production of components, sub-assemblies and final assembly in one integrated scheduling solution. Together with visibility into changing demand and available inventories, this puts the planner in control of a complex environment and ensures that the right products are produced at the right time.

Why DELMIA Quintiq?

Gartner recognizes DELMIA Quintiq as the fastest growing supply chain company among the top five in the industry. More and more organizations are relying on our technology, our people and our approach to solve their planning problems. Here's why:

Optimization that works in the real world

The DELMIA Quintiq optimizer remains unmatched in the market. Powering it is a technology that has broken over 100 records in the world's toughest optimization problems. This same technology now resides in the planning systems of all DELMIA Quintiq customers.

At the click of a button, DELMIA Quintiq can optimize hundreds of thousands of operations. Its scale and flexibility are unequaled; its applications limitless. Apply it to the initial scheduling process to assist your planners in building accurate and cost-efficient schedules. Apply it to specific sequences to optimize the schedule to best match your KPIs, minimize risks, increase resource efficiency and prepare for any eventuality.

Realize the full extent of the DELMIA Quintiq optimizer's transformative power when you apply it to a planning platform configured to your operations and put your planners firmly in control. It takes into account all rules and constraints unique to your operations to create optimal plans that work in your reality. It continuously re-plans and re-optimizes according to changing conditions in the business.

Proven track record

Manufacturers that rely on DELMIA Quintiq solutions to optimize their daily operations include Constellium in France, Outokumpu in Finland, SSAB in Sweden, Thyssen Krupp Steel in Germany, AkzoNobel and ASML in the Netherlands, and Alcoa and Amy's Kitchen, both in the United States.

Significant ROI

DELMIA Quintiq Scheduler is proven to deliver ROI within months of going live. A phased implementation approach ensures incremental returns at every stage. Customers can expect to reduce lead times, inventory levels and operational costs while increasing output and delivery performance.

Robust integration

DELMIA Quintiq products are built with ease of integration in mind. Integration is easy within existing IT frameworks or with solutions from a different vendor. Scheduler can be implemented as a standalone or with other DELMIA Quintiq products such as S&OP and Company Planner. Being SAP-certified and Microsoft-certified, it can also be easily integrated into your existing IT frameworks or with solutions from a different vendor.

Industry standards configured to your business

All DELMIA Quintiq solutions reflect industry standards and best practices. Data-driven configuration ensures that the solution works for your company's unique environment, rules and constraints.

Fast implementation

The DELMIA Quintiq team has implemented solutions in varied industries in almost every region in the world. We work with our customers, in an iterative process, toward a solution that is ready to go live in a matter of months.

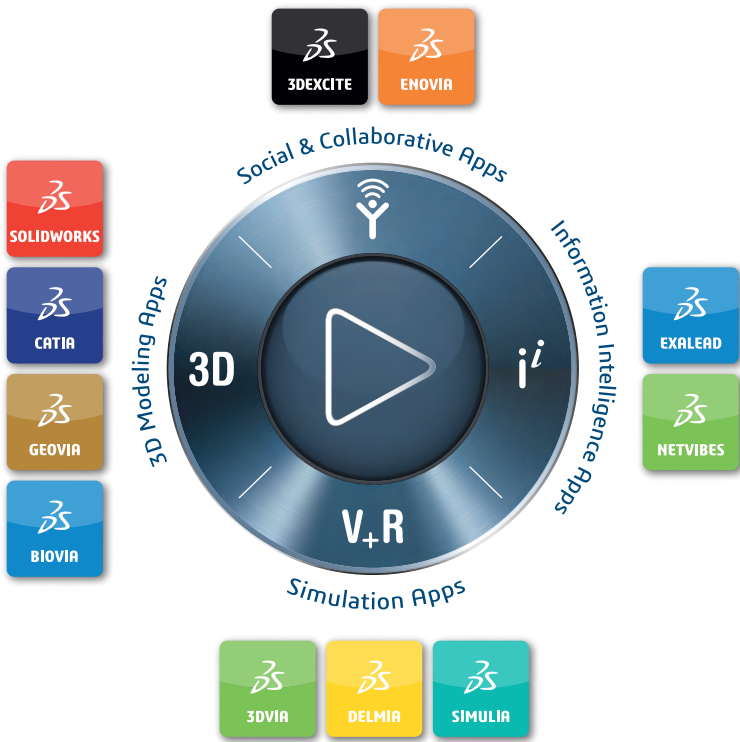
24/7 support

Even after a solution's implementation, DELMIA Quintiq continues to provide support at every step of the way. With 17 offices across the globe, we have the facilities to offer support at your local level. Our solutions are used in 82 countries worldwide, our business is conducted in 11 languages and our network is growing all the time.



Challenge us

Contact your local DELMIA Quintiq sales rep today for a live demo and experience Scheduler's ability to perform faster and better than the competition. Using your actual data, we model your processes to create an optimal plan that will work in your business reality. See for yourself why we are the world's leading planning and optimization provider.



Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

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