



Improve the **efficiency**
and **performance**
of manufacturing operations



Viewlocity Production Engine

Do you want your manufacturing operations to be lean, efficient and reliable?

How do you **decide** which **jobs** to run and when? Where are your **capacity** bottlenecks? Which **orders** will be **late**?

How do you manage your **constrained resources** to achieve cost, through-put and on-time delivery goals?

The Viewlocity Production Engine links operational planning and execution in real time as it concurrently synchronizes order fulfillment activities and resources. Its reality-based planning, dynamic synchronization, real-time execution and continuous feedback give you control at every level of your manufacturing operations. Reality-based manufacturing planning can solve many diverse problems: use our graphical process modeling and integrated discrete-event simulation to solve master planning, load and line balancing, resource and material allocation and production scheduling problems.

“The Viewlocity Production Engine has removed the guesswork from the process and positioned us to work with certainty on the right order at the right time. The gains we are experiencing with Viewlocity are positioning us to do something pretty remarkable: grow our business from right here, within our own four walls.”

Doug Bonzelaar, Application Development Manager,
Herman Miller

Real time simulation

Viewlocity Production Engine allows you to re-plan quickly to account for new or changed demands. The generated plans and schedules are constrained by the availability of finite capacity resources, critical materials, inventory buffer capacities and the mix and priority of all jobs released to the system. The solution will continuously show how decisions and status affect on-time delivery performance. The simulator accurately predicts the flow of orders and materials through the order fulfillment and manufacturing process by using real-time, discrete-event simulation technology.

Decrease inventory levels

In many plants, excess inventory and warehouse space is dedicated to accommodate customer service levels. Pockets of WIP exist in various departments to protect against rush orders, schedule changes and part outages. Viewlocity Production Engine continuously monitors plan progress and exceptions. This allows manufacturers to free up a large amount of much needed floor space, minimize the coordination efforts of the shipping personnel, and reduce finished goods.

Increase productivity and throughput

You may be facing difficulties scheduling a rush order or understanding the orders that may be affected by running a high priority job. The Viewlocity Production Engine is designed to create an operational production plan by optimally utilizing the finite resources of the entire manufacturing process to achieve order fulfillment objectives. The optimal usage of all resources helps you meet more of your demand. Another benefit is that the other orders that will be impacted by a new high priority order are clearly shown to the users.



streamline your manufacturing, go "lean"

Decrease cycle time and work in process

The Viewlocity Production Engine creates a production schedule based on the finite capacity and availability of all critical resources (machines, dies, labor, etc.). Each work center throughout the facility will have an on-line schedule that clearly tells users what the sequence should be and what is currently being worked on. Since the schedule is on-line and dynamic, it is also able to accommodate unexpected manufacturing downtime. Order priority, date and quantity changes are re-planned.

The operators' dispatch list is synchronized with the priorities of the entire plant so that the items for a sales order are coordinated. This allows your operators to utilize resources on jobs that have been optimized based on both your plant and customer satisfaction objectives.

Improve Customer Satisfaction

The Viewlocity Production Engine allows you to proactively resolve problems through the "what-if?" scenarios and dynamic finite scheduling. You can use problem analysis and delivery exceptions and get advance notifications of future resource and material constraints, before they actually have an impact on the current schedule.

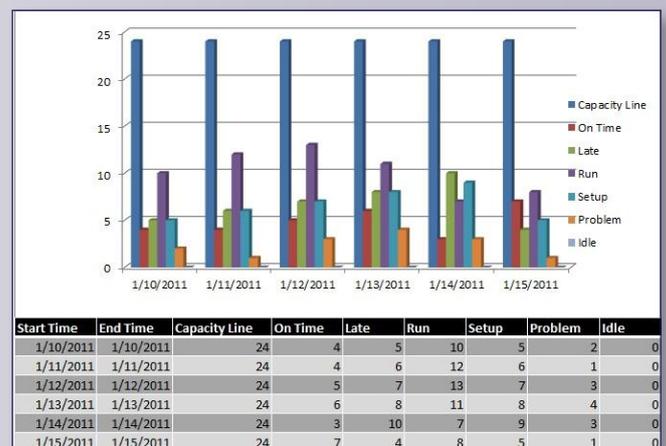
Projected late orders are highlighted as the delivery exceptions occur. You can then "drill down" to identify both critical path items and the capacity bottlenecks that restrict the flow. The root cause of the problem will be identified and shown to the user. With these capabilities you will be able to take proactive measures in order to avoid late deliveries.

Key Benefits

- Minimize inventory waste & obsolescence
- Increase operating efficiency
- Minimize total lead time
- Provide accurate production schedules

Customer Results

- A furniture manufacturer improved on-time delivery to 99% and reduced order fulfillment cycle time from 16 days to 5 days
- A consumer goods manufacturer tripled their order volume while reducing their order fulfillment cycle time by 67%
- A discrete manufacturer reduced both raw material and work-in-process inventory by about 50% each, saving \$15M



Transform your manufacturing operations into a low cost, reliable component of your overall fulfillment supply chain.



Viewlocity Production Engine offers the following features:

Dynamic manufacturing synchronization - zero in on order status and provide real-time feedback for critical mid-course correction. Features include bill of process modeling, dynamic finite scheduling, manufacturing execution and full integration with ERP/MRP systems. Translate an optimized plan into the details you need to execute orders and generate online dispatch lists.

Bill of process - enable direct delivery of materials to the right operation, in the right quantity, at the right time. Using graphical process modeling, you can create a bill of process that lets you define and depict all resources, activities and policies needed to fulfill customer orders. It includes materials, capacity constrained resources (such as machines, tools and labor) as well as drawings, tool delivery, approvals and other support resources.

Manufacturing execution - have real-time, decision making capabilities based on current work orders, activities and resources. The system monitors shop floor activity, analyzes job status and communicates it throughout the organization. Production operators receive dispatched orders and, in turn, can update the system with status reports and any problems encountered. Operators also view the detail they require, from on-line documents to destinations for completed work.

“Being a successful manufacturer is not an easy task today. Manufacturers must be ready to make rapid corrections to their tactics following fast-changing demand, shorter product life cycles, and opportunities to exploit new or emerging markets.”

Pierfrancesco Manenti, EMEA Research Director,
IDC Manufacturing Insights, Nov, 2010

Viewlocity Technologies, a wholly-owned subsidiary of Constellation Software Inc., is a global provider of supply chain software solutions and services. Constellation Software, an international provider of software and services to a variety of industries across the public and private sectors, is listed on the Toronto Stock Exchange (CSU). Viewlocity Technologies provides supply chain visibility, planning, and optimization solutions that help companies operate efficiently in an increasingly complex supply chain landscape. Global companies such as Pfizer, GE Oil & Gas, Ford Motor Company, UK Ministry of Defense and Planar use Viewlocity solutions to establish responsiveness within their supply chains and maintain a competitive advantage.

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