



SOLUTION SHEET

Accelerating efficiency, reliability, and agility in manufacturing operations

AVEVA's manufacturing value chain optimization solutions

With supply chain disruptions, increasingly volatile markets, and an accelerated shift to e-commerce, manufacturing companies can no longer operate their supply chains as before. Today's challenges mean that supply chain and manufacturing operations must work together and ensure the highest business returns that operational constraints allow. The digital transformation of manufacturing operations offers real-time visibility into plant conditions and resources, gives manufacturing plants the ability to adapt to dynamic change, and ensures the efficient and compliant execution of manufacturing plans. All of which enables supply chain agility.

Challenge

Optimizing your manufacturing operations for increased flexibility while securing efficiency, quality, and eco-sustainability to meet customer expectations in increasingly dynamic markets.

An agile and resilient supply chain depends upon reliable and continuously optimized manufacturing operations to minimize losses and flexibility trade-offs.

Sustainability initiatives, which are pushing energy, emission, and waste reduction, remain top of mind in the industry, as does the adoption of a circular economy.

The COVID-19 pandemic accelerated workforce trends like a growing skills gap, employee turnover, and the difficulty of attracting new talent.

Paper-based business processes and limited access to data and information for both continuous improvement and collaboration are obstacles to responsiveness and agility.



Companies with real-time visibility have been able to react to the disruption much more quickly, make fact-based decisions, and minimize the negative impact on their supply chains—or even gain a competitive advantage.

Manufacturing landscape challenges affecting agility:

- With rapid changes to market demand come changes to product demand and packaging configurations.
- Channels to market are shifting away from retail to online, increasing customization and decreasing lot sizes and lead times for orders.
- Increasing demand for transparency across the supply chain by Customers' and regulators' increasing demand for transparency across the supply chain requires traceability of materials and Environmental, Health, and Safety compliance documentation.
- Declining worker productivity over the last five years has accelerated amid social distancing, remote working, and increased employee turnover.
- Boards are making new commitments around sustainability, ethics, and corporate responsibility, which alter operating procedures and rhythms at each stage of the value chain.



E-commerce has grown two to five times faster than before the pandemic.

While supply chain shocks have uncovered operational vulnerabilities, they have also presented transformative opportunities for manufacturing and supply chain leaders.



Solution: Manufacturing value chain optimization

The digital transformation of manufacturing operations is a critical requirement to enable agile and resilient supply chain operations. Manufacturers will see benefits in productivity and sustainability, and at the business level. They will also see benefits in supporting new business models and driving customer engagement.

Optimizing the manufacturing value chain requires that supply chain sales and operations planning is feasible, and based on actual plant conditions, across the entire manufacturing network. Manufacturers then need to optimize execution to balance business needs with operational constraints. Within the plants, manufacturing operations must be continuously optimized to minimize losses in a much more dynamic environment. Multi-site manufacturing operations require a digital value chain optimization strategy that enables agility while securing the efficient and sustainable production of safe products at scale.

AVEVA helps to ensure reliable, efficient, and compliant operations, and to close the supply chain planning and manufacturing operations collaboration gap to optimize processes, empower workers, and to reduce value leaks with advanced digital technologies. Using integrated production planning, scheduling and execution, and a device-agnostic digital platform that connects people and systems from edge to enterprise ultimately enables better and more robust decisions. So manufacturers can reliably deliver quality products on time, and in full.

AVEVA is combining cloud technology and digital twin innovations to deploy consistent process, KPI, and reporting standards across the business. Our solutions can strengthen corporate centers of excellence that identify and validate best practices for standardization and quick roll-out across a network of plants, people, and systems. The collection and centralization of data support advanced analytics and artificial intelligence to explore more complex data relationships, identify new insights for improvement, and optimize operating conditions.

Value Chain Optimization can reduce costs by 5-30% and grow revenue by up to 25%



Improve agility and resilience

Savings of \$16M per year.
Improved OEE by 6%.

"Scheduling and planning is one of the most overlooked opportunities in the manufacturing industry today."



Minimize waste and losses

16% reduction in energy usage, equating to €37 million in savings.

"We succeeded in making global energy consumption data available to our supply chain managers in real time."



Safeguard quality, safety, and compliance

100% first time quality.
Reduced traceback from 4 hours to 1 min.

"AVEVA solutions provide vital data on production processes as well as track and trace to have comprehensive control of manufacturing operations to ensure product quality and control."



Increase productivity and reliability

Reduced downtime by 50%. Increased production by 33%.

"From an administrative perspective, we save a lot of time. From a user's perspective, we minimize frustration. That's the number one benefit."

CPG customer case studies

New Belgium Brewing Co. optimized their brewery to achieve record-high weekly production

As one of the world's most popular craft beer producers, New Belgium Brewing Co. was looking to implement a software strategy for greater visibility and a true understanding of actual production capacity for predictable order fulfillment.

New Belgium used AVEVA Manufacturing Execution System, AVEVA™ System Platform, and AVEVA™ InTouch HMI to identify the sources and the quantity of scheduled downtime, as well as unscheduled downtime events.

New Belgium decreased downtime by more than 50%, increased efficiency of scheduled run time by 25% - 30%, and increased OEE from 45% to 65% in just over 2 years.

The brewery achieved record-high weekly production, successfully meeting customer demands. Taking advantage of the full capabilities of its existing resources at the plant enabled the executive management team to delay funding of additional capital investments, reduce overhead, and make commitments to new things.



Manufacturing customer case studies

Borg Manufacturing transformed operations to deliver on their promise of next-day delivery

Borg Manufacturing is a leading privately-owned Australian melamine and joinery manufacturer, which prides itself on embracing leading innovation to drive its sustainable operations.

Borg wanted to increase batch flexibility on products, while accelerating high-quality, consistent production and keeping their next-day-delivery commercial promise.

Borg Manufacturing integrated its automation with AVEVA Manufacturing Execution System to address the unsustainable manual stock picking processes and manual reporting that hindered access to key data metrics. The solution helped to increase batch flexibility on products, while accelerating high-quality, consistent production.

Borg can now deliver on its promise of next-day delivery with over 7500 made-to-order products and 1200 stock items daily with flexibility in batch size, with no limits on order quantities for customer.

Borg Manufacturing achieved improved line efficiency by 400%, increasing from 2,000 items picked per 12-hour shift to 6,000 items in four hours, and reduced wastage in warehouse production from 5% to 2%, and it provided a sustainable model for standardization, which enabled Borg to accelerate sustainable manufacturing across multiple sites.



How AVEVA can help

In today's highly competitive business environment, the ability to optimize the manufacturing value chain to be more agile and adaptable to changing demand is essential.

AVEVA's manufacturing operations solutions optimize operational effectiveness and flexibility by aligning people and processes with advanced digital technologies for a cost-effective and consistent approach to operational excellence, compliance, transparency, and business agility across the enterprise.

AVEVA connects the power of information and artificial intelligence (AI) with human insight, to enable faster and more precise decision-making, helping industries to further improve their operational efficiency, reliability, and sustainability in an increasingly dynamic market environment.

Software offerings to digitally transform your manufacturing operations and value chain:

For manufacturing industries such as food and beverage, consumer packaged goods, specialty chemicals, and repetitive discrete product manufacturing:

AVEVA™ Manufacturing Execution System: Ensures efficient and compliant execution of the production schedule. Tracks and traces all material flow by digitally managing the rules and information for all operational work and data collection activities in real time.

Advanced Planning and Scheduling: Leverages multi-factor production schedule optimization to improve on-time delivery, plant throughput and scheduling flexibility. Provides real-time visibility into the plant schedule for plant and supply chain operations and enterprise functions.

AVEVA™ Recipe Management: Increases manufacturing flexibility while securing consistent process and product quality. Helps to streamline the new product introduction process.

AVEVA™ Insight: Improves asset reliability and operational performance with actionable information and artificial intelligence capabilities.

AVEVA™ Batch Management: Ensures flexible batch operations with reliable quality and optimal asset utilization.

AVEVA™ Discrete Lean Management: Improves operational effectiveness by measuring and analyzing discrete manufacturing performance with proven lean management practices, and digital access to work schedules, work instructions, and forms for reporting production results.

AVEVA™ APC: Extracts maximum value and minimizes energy consumption by reducing control fluctuations of your production processes and assets.

For more information on how AVEVA can help to optimize your manufacturing value chain, or to talk with one of our experts, please [contact GS PlantOptics](#) - your local AVEVA Select channel partner.



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