# SUPPLY CHAIN PLANNING AND OPTIMIZATION SOLUTION

## FOR PHARMA MANUFACTURING

**DS DELMIA**
Quintiq

Ab Ovo is a platinum DELMIA Quintiq partner with 110+ specialised consultants with a global customer footprint.

## BENEFITS OF OUR SUPPLY CHAIN OPTIMIZATION SOLUTIONS:

### REDUCED LEAD TIMES
*AI-driven scheduling ensures faster production cycles and deliveries.*

### COST SAVINGS
*Efficient resource allocation minimizes waste and lowers operational costs.*

### HIGHER SUPPLY CHAIN RESILIENCE
*Advanced risk management strategies protect against disruptions.*

### GREATER SUSTAINABILITY
*Green supply chain practices support carbon neutrality and regulatory compliance.*

# GROWING MANUFACTURING COMPLEXITY

In pharmaceutical manufacturing, challenges are ever-present. Margins face constant pressure, and customers demand personalized therapies with faster delivery times. Managing production schedules, coordinating with suppliers, and ensuring on-time delivery add layers of complexity to the supply chain. Despite these challenges, customers expect safe, high-quality products and seamless service throughout the entire process.

# ADJUSTMENTS OPTIMIZE SUPPLY CHAIN WITH INTELLIGENT PLANNING

At Ab Ovo, we recognize that pharmaceutical manufacturers encounter complex supply chain challenges, including demand volatility, supply disruptions, and regulatory compliance. Our Supply Chain Planning and Optimization Solutions integrate AI, automation, and real-time analytics to enhance efficiency, reduce costs, and improve resilience.

| Strategic | Tactical | Operational | Execution |
|---|---|---|---|
| • Manufacturing network design | • Production planning optimization | • Resource scheduling | • Production scheduling |
| • Scenario analysis for capacity planning | • Supply chain risk management | • Inventory control and stock management | • Workforce scheduling |
| • Sustainability strategies and carbon-neutral initiatives | • Supplier collaboration and sourcing strategies | • Supplier and procurement coordination | • Quality control inspections |
| | • Tactical route design for inbound and outbound logistics | • Order fulfillment and warehouse operations | • Event management |
| | • Dynamic pricing and cost optimization strategies | • Logistics and transport scheduling | • Real-time monitoring and adjustments |

# TECHNOLOGIES POWERING OUR SUPPLY CHAIN OPTIMIZATION

### AI & MACHINE LEARNING:

Predictive analytics for demand forecasting and risk assessment.

### IOT & REAL-TIME DATA:

Sensor-driven monitoring for real-time visibility.

### CLOUD-BASED ERP & SCM SOLUTIONS:

Integrates all supply chain processes for seamless coordination.

### AUTOMATION & ROBOTICS:

Reduces manual workload in warehouse and logistics operations.

# AI-DRIVEN SUPPLY CHAIN SOLUTIONS FOR PHARMACEUTICAL MANUFACTURING

An optimized supply chain is essential for pharmaceutical manufacturers to maintain efficiency, reduce costs, and enhance resilience. By leveraging AI-driven forecasting, automated scheduling, smart procurement, and real-time monitoring, companies can streamline operations and minimize disruptions. Inventory and warehouse optimization ensure better stock management, while logistics and transportation efficiency improve delivery timelines and reduce expenses. Additionally, proactive risk management enhances visibility and enables quick decision-making. A well-integrated supply chain not only improves operational performance but also drives compliance, sustainability, and long-term growth, making businesses more competitive in a dynamic market.

## 1. DEMAND FORECASTING & S&OP

✓ AI-powered demand forecasting improves production planning, reducing stockouts and excess inventory.

## 2. PRODUCTION SCHEDULING & RESOURCE ALLOCATION

✓ Automated scheduling ensures efficient resource use, minimizing downtime and delays.

## 3. SUPPLIER COLLABORATION & PROCUREMENT

✓ Real-time supplier tracking enhances procurement decisions and reduces disruptions.

## 4. INVENTORY & WAREHOUSE OPTIMIZATION

✓ Smart warehouse management lowers inventory costs and improves order accuracy.

## 5. LOGISTICS & TRANSPORTATION EFFICIENCY

✓ AI-driven route optimization cuts transport costs and improves delivery times.

## 6. REAL-TIME MONITORING & RISK MANAGEMENT

✓ IoT and predictive analytics provide real-time supply chain visibility and fast issue resolution.
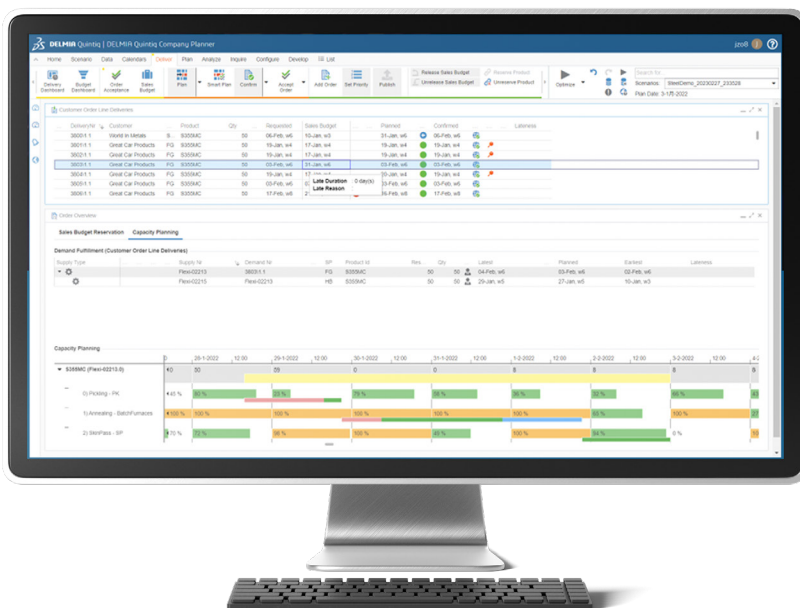
☑ **25% reduction in inventory costs through improved demand planning.**

☑ **30% increase in production efficiency with AI-driven scheduling.**

☑ **20% lower transportation costs due to optimized routing.**

☑ **Higher customer satisfaction through faster order fulfillment.**

SUPPLY CHAIN PLANNING AND OPTIMIZATION SOLUTION
**FOR PHARMA EQUIPMENT MANUFACTURING**

# SUSTAINABLE SOLUTIONS FOR PHARMA INDUSTRY

## COMMITMENT TO SUSTAINABILITY

Sustainability is at the core of our operations. We believe in creating a better world by supporting our customers in achieving greater efficiency and sustainability. Our supply chain planning and optimization solutions are designed to help Pharmaceutical equipment manufacturers minimize waste, reduce emissions, and operate more responsibly.

Beyond offering sustainable solutions, we are committed to becoming a sustainable technology company ourselves. We continuously assess our environmental impact, optimizing our energy consumption and streamlining our business processes.

To drive measurable results, we follow the $CO_2$ Performance Ladder, a leading framework for systematically reducing carbon emissions. By integrating sustainable practices across our operations, we strive to make a positive and lasting impact on both our customers and the environment.

**BUILDING A SUSTAINABLE FUTURE WITH SMART SOLUTIONS**

## ab OVO
GOING BEYOND COMPLEXITY

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