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MANUFACTURING AND DISTRIBUTION

# Manufacturing ERP for Automotive Manufacturers

An ERP system that gives automotive manufacturers an optimized supply chain, streamlined processes, and high-quality production.

Automotive manufacturers have many parts to source, complex processes, and high-quality levels to achieve. As a result, they need a well-connected supply chain, streamlined operations, and tight quality control. In this demand-driven industry, it's also essential to have intelligent forecasting.

The automotive industry fluctuates as changes in the economy, consumer trends, and talent continually shift. Smart technologies and environmental concerns are shaping the industry as vehicle manufacturers try to appeal to younger consumers and interest in electric vehicles increases. These changes make it challenging for manufacturers to find skilled personnel to handle these innovations.

## Common Challenges
## for Automotive Manufacturers

1  Keeping production on track in a volatile landscape

2  Fluctuating demand leading to an overstock of inventory

3  Lack of visibility and control of a complex supply chain

4  Improving sustainability to accommodate greater consumer demand

5  Ensuring quality for a complex production process and many different parts

> " OptiProERP gives us robust manufacturing functionality, an end-to-end management solution, and much-needed visibility into our operations, visibility we need to achieve fast growth.
>
> Dan McNiff,
> President, CarBahn
> "

# Transforming Operations
## to Drive Growth

OptiProERP with SAP Business One provides automotive manufacturing businesses with end-to-end connectivity and visibility. It captures plant floor data and leverages it to accelerate throughput and quality. OptiProERP lets you quickly ramp production up or down based on demand. Its robust planning and scheduling capabilities simplify and enhance the orchestration of your manufacturing processes. It allows you to maximize your production and keep it flowing smoothly.

Robust inventory management allows you to track real-time inventory movement from order to delivery. Inventory and accounting transactions are integrated, and accounts are credited or debited as stock levels are adjusted. OptiProERP lowers inventory carrying costs by keeping inventory levels based on sales orders, demand, and safety stock minimums. It provides visibility into what's in stock, what's on order, and the due date of every production order. Synchronization with purchasing ensures inventory levels are optimized.

OptiProERP gives manufacturers a clear picture of their supply chain at every level. You can collaborate with your suppliers and share data automatically to keep your supply chain optimized. In addition, it allows you to track the performance of your vendors with real-time analytics and dashboards. OptiProERP identifies supply chain trends and provides fast access to data to avoid downstream problems.

OptiProERP helps automotive manufacturers be more sustainable by providing increased productivity and efficiency. It allows businesses to adopt sustainable circular supply chains to reduce waste and supply continual resources. OptiProERP technology competencies help maximize a company's sustainability by providing innovation that gives accurate data and an agile operation. For example, it lets you integrate with machines on the shop floor to keep equipment fully utilized and quickly shut them down when unused. In addition, OptiProERP gives manufacturers data intelligence to make production adjustments to achieve manufacturing sustainability quickly.

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OptiProERP meets stringent compliance and regulatory standards and provides complete traceability to ensure the safety of products. It maintains the entire product history from development to delivery. There is a cradle-to-grave lot, serial number traceability, and serial genealogy of component products. OptiProERP maintains a complete audit trail of manufacturing processes.

You can meet high-quality expectations for automotive products with proactive quality assurance programs. Run tests at any point in production, from inbound raw materials to outbound finished goods. Set up custom inspection plans and schedules and define inspection attributes. Use dashboards to monitor quality events.

# OptiProERP with SAP Business One Critical Benefits for Automotive Manufacturers

OptiProERP is manufacturing ERP built on SAP Business One, the leading ERP for small and midsize enterprises with over 85,000 customers. It provides end-to-end functionality with best-in-class business and industry capabilities to help automotive manufacturers streamline and connect all aspects of their business.

## Deep and End-to-End Industry Functionality

A complete and fully integrated manufacturing ERP solution for automotive manufacturers manages and streamlines all business operations. Departments get connected to include sales, production, and purchasing for greater coordination.

OptiProERP provides end-to-end visibility, advanced manufacturing functionality, and best-practice business processes for the automotive industry. In addition, it delivers increased data for real-time insight into business performance to make better-informed decisions.

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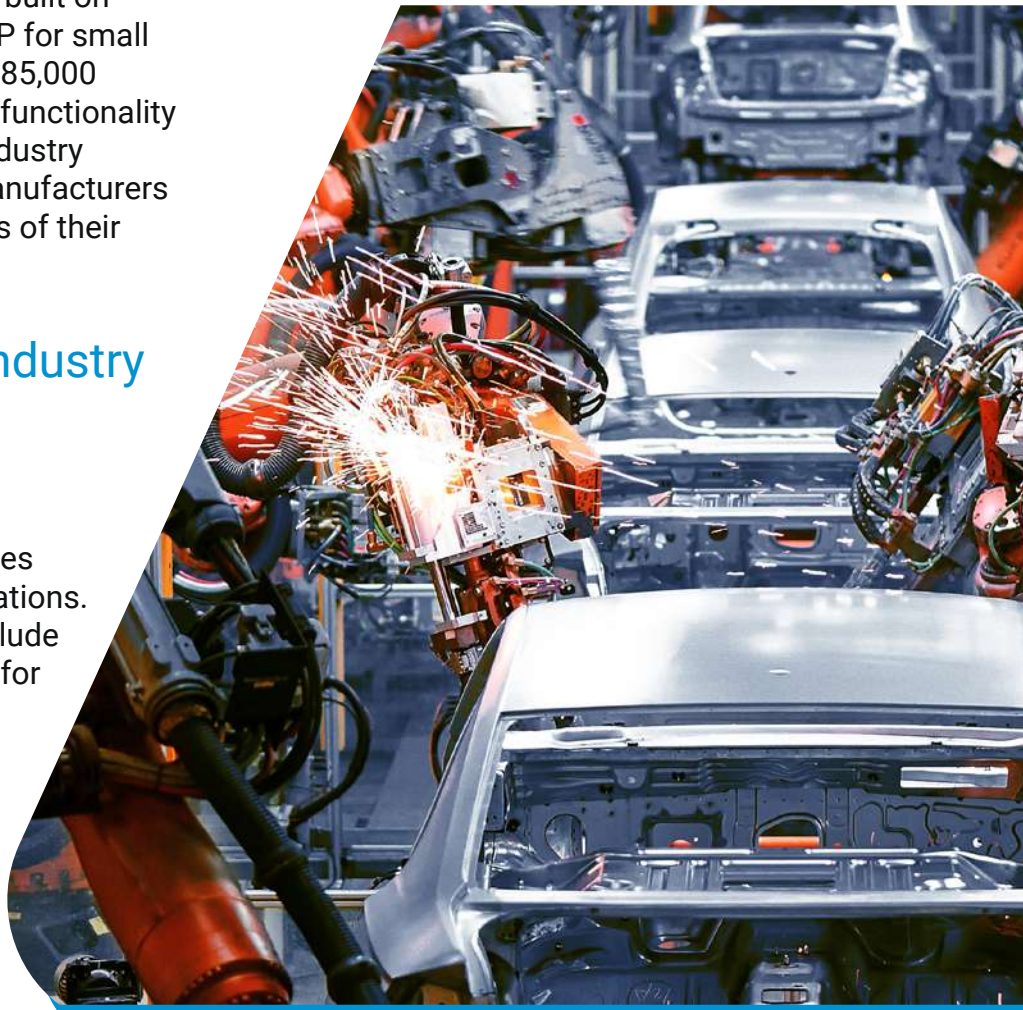
## Optimized Production with Planning, Scheduling, and Shop Floor Execution

Balance demand, capacity, and constraints with advanced planning and scheduling to generate achievable production schedules. Take all resources, including machines, into account to improve equipment usage and minimize resource downtime.

In planning, visualize what production will look like based on "what if" scenarios—capture plant floor data and leverage it to accelerate throughput and quality. Improve on-time deliveries with accurate scheduling for greater customer satisfaction.

## Real-Time Inventory Status with Inventory and Warehouse Management

Real-time status and location of inventory to include materials, parts, work in process, and finished goods. Keep optimal levels of inventory by knowing lead times for procurement and production. Inventory and accounting are integrated, so stock levels are adjusted, accounts are credited or debited, and inventory discrepancies are noted.

Execute transactions and track activity using the mobile app and hand-held scanners with barcodes or QR codes for greater efficiency. The system suggests alternative scenarios for materials considered critical for an expedited order or materials that have been delayed to keep projects on track. Eliminate stock outages, reduce unused inventory, and lower carrying costs. Ensure sufficient stock levels to maintain production schedules.

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# OptiProERP with SAP Business One Functionality Automotive Manufacturers Need

## Financial Management

**1** Manage and forecast cash flow, control budgets, and monitor job costs.

**2** Use real-time reporting with either standard or customized reports for better-informed decisions.

**3** Track fixed assets through a virtual function to eliminate manual entries.

**4** Post and create journal entries and allocate them to a project or profit center.

**5** Track all banking processes and easily reconcile accounts.

**6** Accelerate your financial close and utilize role-based dashboards.

## Inventory Management

**1** Maintain the minimum stock needed with real-time reports that utilize past buying patterns to forecast demand.

**2** Keep track of inventory by physical counting, spot checks, and cycle counting.

**3** Use ABC item analysis to categorize inventory by highest consumption value, lowest consumption rate, and interclass items.

**4** Forecast inventory requirements accurately with hindcasting based on historical demand.

# Materials Requirements Planning (MRP)

1. Use MRP to automate purchasing and production to ensure inventory levels are available when needed.

2. Working backward, the planning engine automatically calculates materials, resources, and capacity needed to complete each step.

3. Forecast inventory demand by sales order, historical sales patterns, or to meet minimum stock requirements.

4. Define total operational capacity based on machines, tooling, and available resources.

5. Work with projected and actual supply chain demand to create production, purchasing, and inventory schedules.

6. Working within a predefined operational capacity, the Resource Planning tool allocates work based on the capacity of available resources.

# Quality Management

1. Execute quality management across receiving, production, and shipping to identify and resolve issues proactively.

2. Use MRP to automate purchasing and production to ensure inventory levels are available when needed.

3. Track raw materials, work in progress, and finished goods to expedite negotiated pricing and if any were faulty.

4. Conduct QC and capture data from any location via mobile and web.

5. Streamline post-inspection processes to determine when received goods are faulty quickly.

6. Execute inspection plans, checklists, and QC tests against products, people, and equipment.

7. Track non-conformances, maintain a complete audit trail, and manage corrective and preventive action processes.

8   Carry out 100% inspection or sampling routines for AQL and non-AQL throughout processes.

9   Implement forward and backward tracing of all serial or lot number movements.

10   Evaluate and rank vendor/supplier performance through key performance indicators (KPIs).

11   Document internal controls, security, quality measures, and document searches and retrievals for audits or inspections.

12   Receive multi-level notifications and historical tags with automated changes to policies, procedures, and more.

13   Support the complete audit from beginning to end in compliance with corporate standards and industry regulations.

14   Report with user-friendly and pre-built reports for vendor, production, and stability analytics.

# Planning & Scheduling

1   Work with projected and actual supply chain demand to create production, purchasing, and inventory schedules.

2   Identify demand for multi-plant entities and consolidate orders for efficient procurement.

3   Explode the planning BOMs and do the same for lower-level items in the production plan.

4   Visualize and interact with your production schedule and click and drag to move production orders and update schedules automatically.

5   Use 'what if' simulations to see how different scenarios impact production.

6   Evaluate the effects of future demand changes to see how or if they can be met.

7   Consider rough cut capacity, target days of stock cover, re-order quantities, and more for scheduling.

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8. Model constraints to include primary, secondary, materials, resources, tooling, labor, and machines.

9. Implement custom rules about how materials are consumed to ensure sub-assemblies and raw materials are used according to business needs.

10. Define schedule optimization rules to deal with problems such as minimizing changeover times, WIP, and stock levels.

11. Create order-based schedules and apply a ranking or weighting to prioritize orders based on resources available and additional constraints.

12. Trace and manage changes, costs, delays, and more.

13. Flexible and customizable to set up the way you need.

14. Quickly run best practice reports and alerts that are ready out-of-the-box.

# Production Management

1. Bill of Materials (BOM) lets you build a comprehensive list of materials, resources, and costs to complete a job.

2. Manage revisions or create alternate BOMs to ensure updated documents get associated with the correct production orders.

3. Use alternate BOMs to create engineering change orders and automatically update all changes.

4. Managers can monitor workers' and machines' performance and job status for any work center.

5. Identify and track direct and indirect costs for material resources and labor.

6. Use production move orders to automate requests to move materials from one onsite location to another while keeping track of the inventory.

7. Set up tooling specifications for machines to monitor performance and maximize capacity.

## Purchasing

**1** Synchronize goods receipts and inventory and have purchasing processes in a central location to manage detailed data.

**2** Match documents and view information trails for audit efficiency.

**3** Use a PO reference to process AP transactions to plan for and purchase needed materials.

**4** Request vendor quotes, create purchase requests, and pay vendors systematically.

**5** Set approvals by dollar thresholds, users, departments, and locations.

**6** Match purchase orders, invoices, and packing slips to ensure accuracy.

## Shop Floor Execution

**1** Manage labor, machines, and materials for optimal shop floor performance.

**2** Include documents, drawings, and videos as attachments for work instructions.

**3** Operators utilize touch screens to log in, start work, manage tasks, and report job status.

**4** Supervisors use the mobile app to monitor production status from anywhere and assign workers with a specific skill set to a particular machine.

## Supply Chain Management

**1** Planning and Scheduling – Integrated and advanced planning, supply and demand planning, distribution requirements planning, and master scheduling.

**2**   Predictive Notifications – Alerts to actual and potential disruptions and opportunities.

**3**   Real-time Collaboration – Communicate with suppliers in real-time on capacity, forecasts, and orders.

**4**   Dynamic Dashboards – A single view of orders, shipments, inventory, and vendor performance.

**5**   Global Trade – Control parcel shipments and ensure cross-border trade compliance.

**6**   Supplier Web Portal – Suppliers can log in 24/7 to view purchase orders and other pertinent information.

**7**   Supplier Management – Create, track, and maintain supplier-purchased items and pricing in one shareable location.

**8**   Supplier Performance – Monitor quality issues, on-time delivery, and performance, and track all supplier transaction information.

**9**   KPI Reporting – Executive-level reports that measure the effectiveness of the supply chain and graphs for visual representations of data.

## Sales & CRM

**1**   Reps can track all opportunities and lead activities throughout the sales cycle.

**2**   Create, manage, and analyze marketing activities to help turn prospects into customers.

**3**   All critical customer information is stored in one place to assist customers quickly.

**4**   A mobile app lets sales reps work from their mobile devices anytime and anywhere.

## Container Management

**1**   Add information from the vendor regarding the contents and shipment data, including landing costs. Containers can be received with items from multiple vendors.

**2** Estimate what items will fit in the container with calculations made based on weight and dimensions. You can create a container with eligible lines selected from different sales orders to a customer.

**3** Keep tabs on the shipment's status and update changes; when received, they are noted across the system.

**4** When a container is received, the lines correlating to the container on the purchase order are adjusted.

**5** When a container is received, a receipt document is created, and all items in a container are updated in inventory management.

# Customer and Vendor Portal

**1** Customers can access their account, order, payment, and service/support information via a web-based, two-way portal.

**2** Vendors can log in 24/7 to view purchase orders and other pertinent information and collaborate with the manufacturer.

# Mobility

**1** Set up triggers and receive alerts for quality issues, inventory levels, machine malfunctions, and purchase requests.

**2** Customize dashboards and receive information from across the business to stay informed.

**3** Have a 360-degree view of customer information, including account, order, payment, and service/support information.

**4** See inventory by item or warehouse and know the location and status of every type of inventory.

**5** View employee productivity to include items made, time to make, interruptions and causes, and faulty items.

**6** Warehouse staff can quickly locate inventory and complete tasks using mobile devices.

**7** Sales staff can manage leads and customer accounts, view stock, and place orders on mobile devices.

**8** Service staff can manage and resolve service tickets and view KPIs related to their performance.

**9** Immediate visibility of the supply chain and trading partner transactions and communications.

**10** Configure products easily and assemble quotes/orders on the fly with accurate price lists.

## Product Configurator

**1** Configure products and create quotations or sales orders according to your specific specs using a rules-based engine.

**2** Make your Product Configurator customer-facing and integrated with your e-commerce site and ERP for your order-to-fulfillment needs.

**3** Create BOMs and assembly routings to manufacture made-to-order or standard assembly products.

**4** A step-by-step guide through the configuration process to make it easy to structure your products to a specific configuration.

**5** Access to previous and existing configurations to create new orders, make adjustments, and find profitable product combinations.

**6** Use multiple dimensional calculations and formulas to determine product material requirements.

**7** See if order configuration components are available and allocate at quote or order level.

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| 8 | Keep a history of changes made to product configurations with a record of who created them. |

| 9 | Take an existing configuration and copy and modify it to create a new product configuration. |

| 10 | Monitor orders with customizable reports and an order queue to review before final approval. |

| 11 | Customers can select the exact product options using a browser-based configurator. |

# Shipping

| 1 | Supports all major carriers. |

| 2 | Validate addresses and create shipping quotes and shipping labels. |

| 3 | Use a consignee account for shipments. |

| 4 | Scan the Bill of Ladings. |

| 5 | Track shipments, cancel shipments, and create a pickup request. |

| 6 | Use international shipping and support for multi-language and currency. |

| 7 | Print shipping labels in batches. |

| 8 | Receive email notifications on the progress of shipments. |

| 9 | See rates for different shipping options. |

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# Warehouse Management System

**1** Issue materials for delivery or production using the mobile app.

**2** Record receipt of goods from vendors or the shop floor.

**3** Capture cycle or physical inventory counting for real-time status of on-hand stock and set replenishment alerts.

**4** Execute transactions and track activity using the mobile app and hand-held scanners with barcodes or QR codes.

> " OptiProERP is an established provider with lots of knowledge, experience, and best practices we can leverage. In addition, we liked that OptiProERP uses SAP, which our parent company uses, albeit an enterprise version, and that OptiProERP has an internal implementation team – no third parties.
>
> Marcus Straw, President and CEO, Applied Physics Technologies "

# OptiProERP Customer Profile: CarBahn

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|---|---|
| Headquarters: | Saratoga, CA |
| Replaced: | MaxxTraxx, accounting software |
| Evaluated: | 15 ERP systems; one was Acumatica |
| Pain Points: | ○ BOMs were written by hand, and they used much tribal knowledge |
| | ○ The finance team spent lots of time manipulating data |
| | ○ It took them more than 5 days to close each month's books |
| | ○ Lack of inventory and financial control |
| Benefits: | ○ Improved analysis using dashboards with KPIs and reports |
| | ○ Less time to process accounting transactions for its four divisions |
| | ○ Greater visibility into business and plant floor operations |
| | ○ Robust manufacturing functionality for greater productivity |

> " Our growth forecast is very aggressive, to the tune of 25 percent to 30 percent a year, so we needed someone to handle us at the very small point we are now but be a perfect fit two years down the road without going to a new ERP system.
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