

INFORMATION ON DEMAND -

JD Edwards World Manufacturing Management



Improve your flexibility in an unpredictable market
Paint a more accurate picture of future demand
Fine-tune your processes to cut waste

INFORMATION ON DEMAND

In an effort to manage increasing market volatility, manufacturers are turning to lean principles, flow-based manufacturing, and demand-driven philosophies and practices. All these approaches share the same goals: cut wasted materials, time, and effort while improving responsiveness. Successful manufacturers agree that, to reach these goals, organizations need a single, integrated source of information and capabilities—one that transforms an enterprise's different locations, departments, and partners into a whole greater than the sum of its parts.

Functional, Affordable, and Reliable Capabilities for the Demand-Driven World

Oracle's JD Edwards World Manufacturing Management improves your relationships with customers, suppliers, and partners and helps you increase efficiency in the processes you share with them. It enables you to find the optimum formula of time, effort, and materials so that you deliver more value to your customers and your shareholders. It delivers the information and capabilities to coordinate the efforts of your shop floor, warehouses, loading docks, and call centers so that you can close that gap between boardroom strategy and everyday reality. And finally, Manufacturing Management makes you flexible, so you can adopt new business models as they emerge, accommodate unique customer practices and requirements, and forge mutually beneficial partnerships with key suppliers.

It also fits well with your business priorities. It adapts to your environment rather than mandating predefined practices and workflows. With a long history of playing a strategic role in thousands of business success stories, you can be confident that we can help usher you through the inevitable changes that your business will face through a unique combination of functionality, affordability, and reliability.

- **Functional.** Its comprehensive capabilities are tuned to the demands of any manufacturing scenario: batch and continuous, discrete and process, engineer to order, and assemble to order.
- **Affordable.** It is easier to implement, less costly to maintain, and requires fewer of your resources and less of your attention over time.
- **Reliable.** Its high-quality, proven performance allows you to focus on your business instead of your technology.

Multimode Manufacturing: Improving Your Flexibility in an Unpredictable Market

For manufacturers, the days of doing one thing and doing it well are long gone. In a global market, customers have access to a wider range of manufacturing options. They also have higher expectations. When one company can't deliver the optimum combination of flexibility, price, and responsiveness, customers will look elsewhere with the confidence they can find what they need, when they need it.

Manufacturing Management enables you to offer your customers multimode capabilities to better address their shifting demands. In essence, you can offer customers a "one-stop shop" for their manufacturing needs. With a diverse portfolio of manufacturing techniques, you have the flexibility to pursue more customers and more opportunities. At the same time, you can synchronize and integrate a variety of manufacturing modes within a single enterprise to make the best use of materials and capacity—while maintaining your responsiveness to shifting demand.

With Manufacturing Management, a single, integrated database provides you with a consistent, real-time view of your multiple manufacturing tactics, including:

- Discrete.
- Process.
- Assemble to order.
- Engineer to order.
- Make to order.
- Highly repetitive.
- Global supply distribution.

Regardless of whether the bulk of your business is batch or process oriented, you have the tools to adopt make-to-order, demand-driven practices that position you for greater market share.

Engineering Change Management: Streamlining Changes for Better Responsiveness

At best, manufacturers see changes as a nuisance. At worst, they view them as the enemy. They can bog down an otherwise smoothly running manufacturing process by adding time and unexpected cost. In the emerging demand-driven market, however, changes take on new importance. A strategic approach to engineering changes—whether dictated by customers, regulators, or the competition—can differentiate a company in a competitive market and improve its responsiveness, efficiency, and profitability.

By transforming the change process into a more manageable, integrated process, Manufacturing Management minimizes the disruption that engineering changes can cause in your business. Manufacturing Management streamlines the approval process for both small alterations and major design revisions, which eliminates the bottlenecks that can stymie efficient production.

A single, integrated source of information helps build consensus among your engineering team, manufacturing staff, marketing personnel, and your customers, so you can better determine the feasibility and cost of changes. Key functionality includes:

- Multilevel automated approval.
- Itemization of steps required to implement the change through a process routing.
- Automated downloading of parts or where-used lists to facilitate same-as-except processing of a change order.
- Automated upload of information to bills of material and item masters on approval of a change order.
- Flash messaging in planning, purchasing, and inventory to warn of a pending engineering change order.

- A centralized database of all critical engineering change information on costs, approval history, and change status. You can also tailor the change control process to your unique environment, with flexible capabilities for:
- Engineering project/task management.
- Extensive coding to define status, disposition, and reason for the change order.
- Support of multiple parent and/or component relationships on the same change order.
- Bill of material retrieval by revision to support not only engineering but also customer service and manufacturing.

Configuration Management: Maintaining Flexibility While Minimizing Costs

How can a manufacturer offer customers unique products, tailored to their specifications, and still maintain an efficient shop floor? The reality is that customers are no longer willing to sacrifice quick turnaround for custom products. So manufacturers have to find that optimum balance between make-to-order flexibility and the operational efficiency and predictability that come with standard product configurations.

Oracle's JD Edwards World Base Configurator can help you systematize configuration management so that you can broaden your product offering, offer custom products, and still enforce the discipline and consistency you need to maintain profitability. By automating your to-order environment, you can continue to offer your customers a wide range of custom products that meet their unique needs. At the same time, you reduce the complexity usually associated with custom configurations by addressing complex options and dependencies through rule-based editing, parts lists, and routing. With Base Configurator, you can:

- Quickly check item compatibility and an order's manufacturability.
- Ensure accurate pricing with system-calculated totals and itemizations.
- Standardize specifications for multilevel configured items.
- Create configured routings and parts lists at sales order entry that flow through the manufacturing process.
- Easily define options for diverse items by using simple names for complex configurations.
- Automatically check for availability of requested configurations to avoid costly tracking, rebuilds, and shipping delays.

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Product Lifecycle Costing: Improving Your Understanding of Long-Term Product Costing

Volatile markets mean increasing unpredictability for the manufacturer. As companies evolve to demand-driven practices—where customer orders drive production schedules and replenishment strategies—companies find it more difficult to cost products accurately. But in an environment of shrinking margins, companies that can accurately track costs over the entire life of a product can better weather market fluctuations.

With Manufacturing Management, you have the capabilities to capture costs from all product stages, from initial design through service and warranty. As your products progress from initial launch to obsolescence, you can ensure the accuracy of your costing through budget-to-actual comparisons at all product lifecycle stages.

You also have the flexibility to define unique costing categories for each product to determine direct and sub-contract labor, material, utilities, transportation, and royalty costs. Armed with this information, you can develop the pricing strategies that ensure that you remain competitive in your market, without jeopardizing profitability. You can also make better decisions regarding the best product strategy for your market and customers, with detailed information on:

- The cost impact of changes.
- The most profitable product mix.
- Root cause analysis of service and warranty costs.
- Standard, current, and future costs.
- Actual costing and the ability to mix with standard costing.

Enterprise Facilities Planning: Synchronizing Your Multiple Locations and Facilities

The most successful, most efficient manufacturers optimize production across all their locations and facilities. They develop a consolidated picture of supply and demand for their entire enterprise and distribute information, materials, and capacity to achieve the most profitable mix of resources and effort. Beyond simply shifting production to underused facilities, they share information on inventory levels, facility capacities, and scheduled maintenance downtimes to improve responsiveness to customer requirements and market conditions.

The enterprise facilities planning capabilities in this program help your multiple locations think and act as one for the most efficient, profitable, and timely response to your customers. You can develop a comprehensive picture of material requirements for your entire enterprise and consolidate your buying power into larger contracts. You can also streamline inventory levels and trim unneeded inventory by shifting supplies among your various locations, as needed, when needed.

Manufacturing Management allows you to deploy resources and revise your manufacturing plan according to the bigger picture of the larger enterprise, instead of the competing demands of your different locations. Capabilities include:

- Consolidation of various logical or physical branches or plants into one planning run.
- Transfer of resupply orders for a component to another plant.
- Consolidation of common purchasing functions.
- Passage of replenishment demand from one location to another.
- Recognition of forecasted or planned interplant demand.
- Accounting of material and transfer costs in transit between the demand and supply location.

Forecasting: Painting a More Accurate Picture of Future Demand

In a demand-driven world, customer requirements are a moving target. Because of shrinking lead times and smaller windows to react to customer demand, manufacturers have to reinvent their forecasting strategies to accommodate increasing market volatility.

With Oracle's JD Edwards World Requirements Planning, you can base your forecasts on evolving customer demand rather than simply on historical precedent. You can maintain distinct forecasts based on area, revision level, and customer and improve your responsiveness to aberrations in expected demand. You can also aggregate demand into different categories to understand the patterns that emerge at the market, product family, and territory levels. The tighter correlation between expected demand and actual results helps you reduce inventories and develop more efficient replenishment strategies with your suppliers.

Also, as your product portfolio becomes larger and more complex, you can employ different industry-standard forecasting algorithms—or define your own—to capture your precise product demand patterns. Requirements Planning's other sophisticated forecasting capabilities include:

- Single item forecasting with summarization capability.
- More than 10 statistical forecasting methods.
- Determination of a "best fit" method, comparing forecast to actual amounts.
- Input from 24-month history and, optionally, concrete demand to provide increased stability.
- Adjustment and storage of both actual data and forecasted data—with the ability to enter notes explaining the adjustment.
- Provision of multiple forecast summary groups.
- Ability to adjust or input any level of summarization forecast and expand it to successive, lower levels.

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Supplier Management: Building Synergies Within Your Supply Network

Strong supplier relationships are a top priority for any demand-driven enterprise. Why? First, efficient supplier relationships improve your ability to react to customer demand. As you and your suppliers share customer, inventory, and order information, you can develop shared processes that streamline the movement of materials among your businesses—thereby reducing your own lead times. Also, by developing strategic relationships with your suppliers, you can lower your material costs by offering key partners long-term contracts. You also see higher quality components, which ultimately improves customer satisfaction and loyalty.

Manufacturing Management provides the foundation for better collaboration with your suppliers. It improves your ability to share information with strategic suppliers, accelerate the movement of materials within your supply chain, and synchronize your reactions to changing customer requirements. It also enables you to monitor and analyze supplier performance more closely. With historical information on component quality and delivery performance, you can choose the best-qualified suppliers and expand your roster of preferred partners.

The following tools can help transform your supplier contacts into a strategic resource:

- Advance Purchase Order Processing: Multiline purchase and online approval cycles for more efficient procurement and sourcing processes.
- Vendor Release Scheduling: Vendor- and item-specific relationships for scheduled releases at the vendor's site.
- Receipts Routing: For quicker processing of inbound materials through predefined receipt steps and inspections.
- Evaluated Receipts Settlement: For the automatic creation of vouchers, tax calculations, and journal entries.
- Supplier Analysis: To track supplier performance in the critical areas of price, quality, and delivery.
- Electronic Data Interchange: To automate purchase order processing, vendor release scheduling, and advance ship notifications—any of a host of standard shared processes.
- Supplier Self Service: Enables suppliers real-time visibility of purchase orders, inventory levels, and payables information to help create a more efficient and timely supply chain.

Factory Data Collection: Streamlining Access to Real-Time Information

Real-time responsiveness requires real-time information. The more efficiently information moves from your shelves, your equipment, and your shop floor, the better you can react to fluctuations in demand.

We support data collection tools such as fixed-base scanners, handheld and vehicle-mounted devices, and radio frequency technology so that you can integrate the information they collect into your view of your enterprise. You can monitor goods as they move through your facilities and track the use of equipment in real time. That means you have a better understanding of your existing capacity, so you can make better decisions on how to react to changing customer requirements.

Instead of manually collecting this information, your employees can focus on serving customers and getting orders out the door. As you automate data collection, you also see corresponding increases in the accuracy and efficiency of activities such as:

- Purchased inventory receipts.
- Cycle counting and physical inventory.
- Pick and ship confirmation.
- Movement routing and tracking.
- Attendance, time entry, and labor reporting.
- Work order completions and putaway.
- Hours and quantities completed by operation.
- Inventory issues and backflush.

Other areas of your business also benefit from the improved flow of information. Shop floor control, inventory, sales order processing, purchasing, and payroll can all tap into the real-time data that is relevant to their responsibilities. Your entire organization works from the same information, which facilitates synchronized action across your different departments.

Finite Capacity Scheduling: Making the Best Use of Your Time, People, and Equipment

Manufacturers have always had the challenge of marshalling limited resources and capacity to address seemingly endless—and unpredictable—demand. In volatile markets, that challenge becomes even more difficult. As manufacturing organizations embrace demand-driven principles, they face increasingly smaller planning windows and have less time to translate plans into action on the shop floor.

By helping you locate and manage the critical machines, material, tools, and skills, Oracle's JD Edwards World Capacity Planning allows you to adopt a more proactive scheduling strategy. You can achieve a more feasible balance between available capacity and the material and resources needed for schedules released to the floor. In effect, your manufacturing plan takes into account the realities of your shop floor so that you and your customers know that you can deliver what you promise.

Better synchronization of your plan and your shop floor helps you identify bottlenecks and improve productivity and decreases the manual planning required to load the shop. It also improves the accuracy of your release horizons. As you better synchronize your planning and your shop floor, you reduce lead times and backlogs, which enhances your flexibility and responsiveness. Capabilities include:

- Individual displays for supervisors, to help them manage their work centers and inquire into others.
- Real-time screen refreshes when plans change.
- Ability to schedule tooling and people.
- Optimized scheduling to balance the value of on-time shipments, inventory carrying costs, and setups.

Demand-Flow Manufacturing: Fine-Tuning Your Processes to Cut Waste and Improve Responsiveness

The principles of demand flow are leading many manufacturers to rethink their approaches to their markets. Customers want custom products and shorter lead times. To keep pace, many manufacturers have abandoned the mass-production mind-set in favor of flow-based methods, where manufacturers and suppliers work in concert to address customer demand as it evolves.

Manufacturing Management helps you trim the waste and inefficiency from your manufacturing and support processes to achieve a leaner, flow-based environment. It helps you transform isolated, batch-oriented production into a smoother, better orchestrated whole that uses materials and capacity more efficiently. It improves your view into constantly shifting inventories and changing shop flow conditions so that you can reallocate effort and materials where they're needed, when they're needed. The resulting efficiency improves your responsiveness to your market and helps you operate more profitably as you shorten cycle times, reduce inventories and lot sizes, and streamline setup times. You can also lower your investment in inventory but still maintain your ability to deliver on customer expectations.

Our single, integrated source of management information helps you defuse the potential problem areas of your business that can cause bottlenecks and inefficiencies. The tools that can help you make demand-flow manufacturing a workable reality include:

- A planning system designed to drive inventories closer to zero.
- Vendor release scheduling that allows shipment against blanket purchase orders and contracts.
- A full set of EDI transactions to support electronic commerce with both your suppliers and customers.
- Paperless production line scheduling for highly repetitive, cellular, and flow manufacturing.
- Traditional work-order-driven production.
- Backflushing of material and labor at either item completion or at critical pay points in the process.
- Visibility into all components of lead time.
- More efficient pipeline of deliveries and receipts.
- Support for kanban material movement.
- Powerful concurrent engineering capabilities.
- Integrated, paperless engineering change management.
- Quality management to help ensure that product quality is consistent and that continuous improvement becomes a reality.

Batch Process Manufacturing: Improving Visibility into Product Location for Better Accountability

The adage “out of sight, out of mind” doesn’t apply to the manufacturer. The responsibility for the safety of finished goods extends well beyond the manufacturer’s loading dock.

The fact is, governments, supply chain partners, and consumers expect manufacturers to know the path and final destination of their products—especially food, pharmaceuticals, and chemicals—so they can act quickly in the event of a quarantine or recall.

With Manufacturing Management, you have a well-documented, easily accessed record of the path your products follow as different products move among different suppliers and customers. Real-time information on each batch at all stages of the manufacturing process helps you maintain your regulatory compliance and address customer information needs. Manufacturing Management offers:

- Batch quantity bills of material and routings.
- Multiple batch or formula types per batch size.
- Coding in the bill that allows an item to be noted as having a fixed or variable quantity per unit.
- Full multilevel lot trace/track history and inquiry from receipt of a component through manufacture and, ultimately, to the customer.
- Lot status used in on-hand calculations, MPS/MRP logic, and sales order allocations.
- Multiple lot identification.
- The ability to identify the shelf life of a product when it is produced.
- Serial number tracking by using both the manufacturer’s and customer’s numbering conventions.
- Automatic calculation of lot expiration.

Warehouse Operations: Enhancing Your Control of Inbound and Outbound Goods

In many ways, manufacturers need to think like distributors to build efficiencies and trim waste. The ultimate goal is improving profitability, and successful manufacturers must evaluate every aspect of their business—not just the shop floor—to reach that goal. The receipt of goods, inventory movement, putaway, work center replenishment, and shipping—all play a role in the ultimate efficiency of production. A bottleneck in any one of these areas can add time and unnecessary effort to the production cycle.

Warehouse management capabilities in this software helps you streamline the movement of materials and finished goods, both within your enterprise and throughout your supply chain. Because you have better control of inbound and outbound goods, you can offer customers more precise delivery times and better order management. You also establish a more consistent and efficient flow of material to the shop floor, which translates into more level production cycles with fewer bottlenecks.

Some of the capabilities that can optimize your warehouse operations include:

- Directed putaway, picking, and replenishment.
- Automated location and space use recommendations.
- Package and repack recommendations.
- Lot, serial number, and pallet control.
- Carton and container management.
- Cycle counting and inventory control.
- Fixed, random, and FIFO capabilities.
- Rule-based, table-driven processing for varying move methods against a range of item types.
- Cross-docking to streamline flow of product from receiving to shipment.

Maintenance Management: Extending the Life of Your Equipment Investment

Manufacturers are no strangers to the increasing pressure on margins. Like all businesses, they must do more with less as global competition increases. In response, manufacturers strive to get more from their existing investment in equipment. That means a greater emphasis on effective maintenance programs that can lower the long-term costs of keeping equipment ready for the rigors of a demand-driven world.

With Oracle's JD Edwards World Plant and Equipment Maintenance Management, you can adopt a maintenance policy that emphasizes more cost-effective, preventive maintenance rather than costly corrective action. Not only does this strategy lower the costs of your maintenance activities, it also results in less production capacity lost to downtime. Plant and Equipment Maintenance Management gives you the tools to integrate your maintenance-related material and labor into your planning and forecasting so that you can anticipate the impact on your ongoing production. By addressing the maintenance function as a manufacturing activity, you also realize new efficiencies in work order management, parts inventory, and maintenance purchasing. The advantages include:

- Better use of machines and work centers due to better planning of scheduled downtime.
- Extended equipment life.
- Efficiently stocked and accurately monitored spare parts inventories.
- Fewer idle personnel—both maintenance and line.
- Smaller stored parts inventory.
- Fewer stockouts.

Oracle's JD Edwards World: Delivering Comprehensive, Affordable, and Reliable Software

Although companies choose an enterprise solution for any number of reasons, they tend to stay with a solution for the same reason—because it performs as promised. Many companies look at software as a cost of doing business. With us, you get software that's an investment in the future of your business.

The comprehensive JD Edwards World Manufacturing software is designed from the ground up for reliability and affordability. Because it offers integrated application software on a platform that integrates the operating system, hardware, and database, you can realize value from your solution sooner, rather than throwing critical resources at a costly, lengthy implementation.

Oracle's JD Edwards World has the flexibility and scalability to support your business as it grows and changes—the solution that fits your business today will fit your business tomorrow.



ORACLE®

Oracle Corporation

World Headquarters

500 Oracle Parkway
Redwood Shores,
CA 94065
U.S.A.

Worldwide Inquiries

Phone
+1.650.506.7000

Fax
+1.650.506.7200

oracle.com

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C14735-01 -