

# data sheet

## ORACLE WAREHOUSE MANAGEMENT 11i

Oracle® Warehouse Management (WMS) provides advanced, real time warehouse management functionality for a wide variety of business types. Oracle WMS automates and optimizes material handling processes to reduce labor costs, improve facility utilization, increase order accuracy and provide innovative services to customers. Oracle WMS is part of the Oracle E-Business Suite, an integrated set of applications that are engineered to work together

- A built-in part of the Oracle E-Business Suite
- Flexible, rules based Architecture
- Mobile (RF) and barcoding Support
- Directed put-away and directed picking
- License plate control and container management
- Advanced pick methodologies
- Automated task dispatch and task management
- ASN/Non-ASN receiving and inspection
- Seamless integration with Mobile Quality
- Manufacturing materials management support
- Opportunistic cross-docking
- Advanced lot and serial control and genealogy
- Cycle count and physical inventory
- Customer compliance labeling
- Shipment cartization and consolidation
- Material status tracking and control
- Exception alerts and workflow based corrective actions

### Built-In, not Bolt-On Architecture

Oracle WMS leverages the same data as the rest of the Oracle E-Business suite, with no data duplication or latency. This “built-in” approach eliminates the complex and costly integrations associated with a traditional “bolt-on” WMS system, and dramatically accelerates and improves the ROI and overall cost of ownership.

### Rules Driven Architecture

Oracle WMS has at its core a flexible and powerful business rules engine, which permits extensive tailoring of key WMS processes, such as directed picking and put-away without the need to customize code. This extensible rules based architecture enables key processes to evolve and adapt dynamically, further improving the ROI.

Rules Workbench (Figure 1) Specific Rules can be assigned for picking sequentially for item, Item category, Project, Task, Supplier

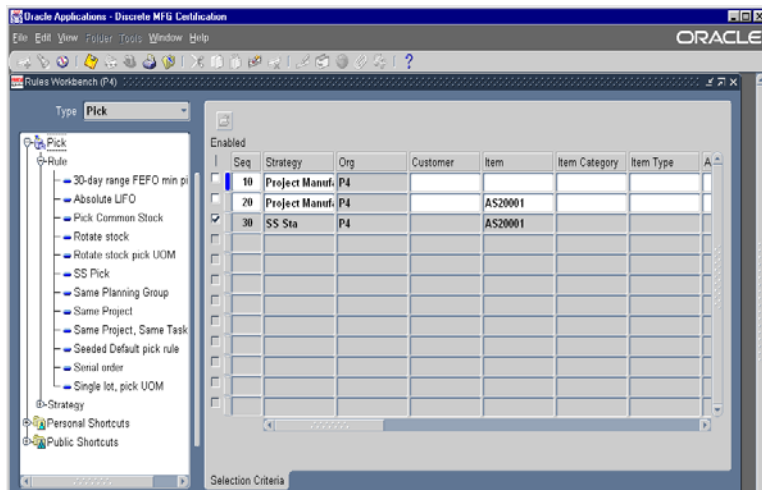


Figure 1

### Mobile/Barcode Support

Oracle WMS is designed from the ground up to leverage the efficiency and accuracy of mobile hand-held computers and bar code scanning, without the need for any 3rd party middleware. For more information on Oracle's mobile architecture please see the Mobile Supply Chain Applications datasheet.

### License Plate Numbers

Oracle WMS fully integrates the use of License Plate Numbers (LPN) into warehouse processes. An LPN is a unique number (typically bar-coded) that can be assigned to any arbitrary group of inventory. LPNs enable users to perform complex inventory transactions via a single bar code scan, improving

	<p>perform complex inventory transactions via a single bar code scan, improving efficiency and accuracy.</p> <p><b>Label Printing and Customer Compliance Labeling</b></p> <p>Oracle WMS allows the user to define and print any number of label formats. These labels can be printed on demand or triggered automatically by any WMS event. User defined business rules automatically select the correct label format for that specific transaction. Oracle WMS interfaces with several partners for the design and rendering of the actual label. This delivers a robust and flexible compliance labeling system. Oracle WMS supports printing of labels for WIP inventory, shipping and receiving. Oracle WMS supports with GTIN (Global Trade Item numbers)/UCC (Uniform code council) NDC (National Drug Code) bar code scanning support, User can scan a GTIN barcode and the system will translate the scanned value to an internal item.</p> <p><b>Material Handling Systems Integration</b></p> <p>Oracle WMS provides integration to storage and retrieval systems, carousels, conveyors and automated guided vehicles using pre-built integration kits as well as open API's. These capabilities simplify the cost and complexity of integration. Response API will allow a warehouse control system or other interface to pass information about completed picking tasks back to WMS to be processed as transaction in Oracle.</p> <p><b>Inbound Logistics</b></p> <p><b>Receiving and Inspection</b></p> <p>Oracle WMS supports receiving against multiple documents types (PO's, blankets, RMAs, In-Transit shipment and Internal requisition). Inbound material can be routed directly to inventory, staged then put-away, or inspected prior to put-away (with or without integration to Mobile Quality). Oracle WMS provides dynamic creations of item cross reference such as supplier item during receipt.</p> <p><b>Directed Put-Away and Cross-Docking</b></p> <p>Oracle WMS suggests optimal put-away location(s) that are automatically determined by a set of user configurable business rules. These rules may be used to enforce hazardous material rules or other storage restrictions, minimize storage fragmentation. The suggested put-away rules enable companies to increase utilization, and reduce obsolescence. Additionally, items with material shortages can be automatically cross-docked at receipt, thereby reducing material handling costs.</p> <p><b>Outbound Logistics</b></p> <p><b>Trip, Delivery and Dock Planning</b></p> <p>Oracle WMS supports automated or manual creation of trips and deliveries, as well as scheduling of outbound carrier appointments, dock door availability and staging lane usage. These capabilities improve the efficiency of receiving and shipping processes.</p> <p><b>Pick Wave Selection</b></p> <p>Oracle WMS provides a graphical interface to effectively build a pick wave based on combinations of selection criteria including order lines, containers, deliveries, delivery schedules, etc. This flexibility ensures proper prioritization of pick activities.</p> <p><b>Task Management and Directed Picking</b></p> <p>Oracle WMS determines the inventory to allocate to a specific pick task automatically based upon user defined business rules. The associated pick tasks are sequenced and grouped according to the pick methodology, work</p>
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load, pick routing, warehouse topology etc. Tasks are then dispatched to the optimal user's mobile device based upon user-defined rules that match the skills, equipment and proximity of the user to the tasks. This complete process optimizes inventory utilization as well as warehouse labor productivity.. Pick methodologies such as cluster picking, order picking and zone picking allow a configurable division of labor within the facility for sales order, manufacturing component and replenishment picks with an optimal traversal path to perform picks.

**Cartonization and Packing**

Oracle WMS automatically determines container type and size dimensions as well as carton numbers needed. Multiple levels of packing and the associated labels are also supported. This capability improves the efficiency of container usage.

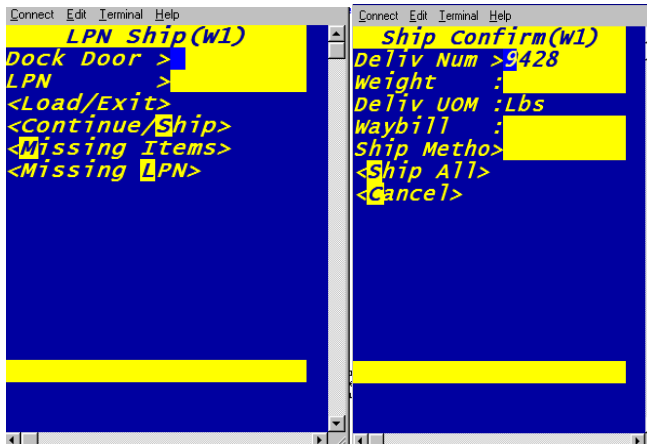
**Shipment Consolidation and Loading**

Oracle WMS allows the user to consolidate multiple, partially filled containers (and associated license plates) into fewer, optimized containers. Containers are scanned, as they are loaded, ensuring that every license plate is correctly accounted for. System directed material consolidation based on either LPN, Locator or both prior to fulfillment of Sales Orders is also provided..

**Just in time Shipments**

Oracle WMS supports the immediate shipping of goods against a sales order, bypassing the normal pick release process if necessary. This capability supports the high velocity shipping processes often associated with flow or "lean manufacturing" environments. Data entry can be even further reduced in assemble to order environments where the material is matched to the sales order at manufacturing completion.

**Mobile based Shipment**



**Reverse Logistics**

**Return Material Authorizations (RMA)'s and Supplier Returns**

Oracle WMS provides robust support for reverse logistics processes. Receipt items, date, quantity can be verified against RMA on receiving and routed to inspection as required. The Supplier Returns capability supports the return of material back to the appropriate supplier. The associated credits and inventory adjustments transactions are automatically applied.

**Manufacturing Integration and Value Added Services (VAS)**

**Mixed-mode Manufacturing**

Oracle WMS Supports mobile materials management tasks associated with

	<p>assemble to order (ATO), project-based/engineer to order (ETO), Discrete and Repetitive/Flow manufacturing environments concurrently. This flexibility enables companies to transition from traditional make to stock discrete manufacturing to assemble to order and flow manufacturing. Oracle WMS provides an integrated genealogy and transaction history tracking for lots and serials built in Oracle's Manufacturing applications.</p> <p><b>Manufacturing Component Issues</b></p> <p>Oracle WMS supports the management and execution of WIP component picking for manufacturing jobs, in a similar mode to that of outbound customer orders. This support includes task dispatching, task sequencing, task interleaving, etc.</p> <p><b>Completions to Inventory and Cross-Docking</b></p> <p>Oracle WMS supports the completion of a manufacturing job into an LPN and its subsequent put-away to inventory using directed put-away rules. Completions may be cross-docked to shipping or manufacturing should there be a material shortage.</p> <p><b>Kitting/Dekitting</b></p> <p>Multi-level bill of material functionality is available within Oracle WMS to support pick-to-order kitting as well as pre-built kits. Assembly warehouse activities are supported and are user configurable and transactable from mobile applications.</p> <p><b>Advanced Inventory, Storage and Facility Management</b></p> <p><b>Material Status Control</b></p> <p>This Oracle WMS capability controls the eligibility of a specific material holding for various transactions (e.g. damaged goods can't be sold, but they can be transferred).</p> <p><b>Advanced Lot and Serial Control</b></p> <p>Oracle WMS supports highly flexible, user-configurable lot and serial attributes, which may be used to store additional information, without customization. Lots may be split and merged, and a complete genealogy is maintained of any serial or lot controlled item, providing immediate information in the event of a recall</p> <p><b>Automated Replenishment</b></p> <p>Oracle WMS supports both inventory and MRP replenishment planning, dynamic (order demand or activity) replenishment and replenishment direct from receiving. Material can be sourced from any warehouse or from an external supplier.</p> <p><b>Cycle Counting/Physical Inventory</b></p> <p>This Oracle WMS capability provides for full physical inventories, and multiple user definable count criteria by item, location, pick frequency, days, discrepancy, etc. Cycle counts can be directed/dispatched by the system and task interleaved with other tasks to efficiently ensure accurate inventory information.</p> <p><b>Inventory Ownership Tracking</b></p> <p>Oracle WMS enables companies holding inventory on their premises to have visibility to the ownership and planning responsibility of that inventory automatically at receiving. This supports initiatives such as vendor managed inventory (VMI).</p>
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**Material Storage based on locator dimensions**

Oracle WMS facilitates user to considering locator capacity based on locator dimensions facilitates manual and automated material storage for items stored in different UOM in same place. Report on capacity utilization enables optimum use of storage space

**Kanban Management**

Oracle WMS supports both internal and external supplier kanbans, which streamlines the flow of products to and through the warehouse. The system provides great flexibility in making replenishment choices and implementing Flow Manufacturing. Oracle WMS integration with Oracle shop floor manufacturing enables automatic creation of lot based jobs for production-based replenishment.

**Inter-Organization Transfers**

Oracle WMS facilitates transfer of goods between two organizations via an inventory based transfer and internal requisition mechanism.

**Performance Management Tools**

**WMS Control Board**

The WMS Control Board allows the warehouse manager to monitor and fine-tune the activity in the distribution center. Warehouse productivity and efficiency increases due to reduced staffing levels and increased inventory fulfillment rates. Warehouse control board can be used for task management with features such as query management and mass update for changes to prioritization, manual task assignment and task release.

Warehouse Control Board – Query

**KEY BENEFITS**

ORACLE WMS HELPS COMPANIES INCREASE WAREHOUSE PRODUCTIVITY AND SHIPMENT VELOCITY.

KEY BENEFITS INCLUDE:

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Reduces implementation complexity by built in integration to the E-Business Suite

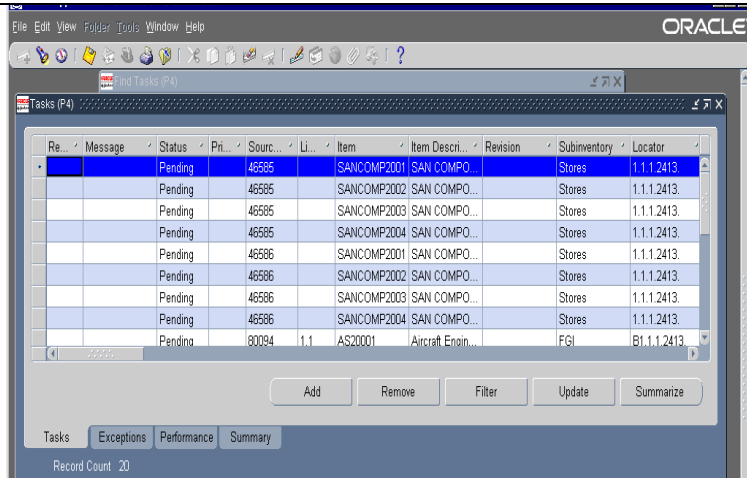
Improves productivity and velocity through process automation, storage optimization, automated and task dispatching  
Increases accuracy through barcode scanning, real-time validation and tracking

Adapts to changing business needs without customization

**RELATED PRODUCTS AND SERVICES:**

Oracle WMS is part of Oracle's Order Fulfillment offering. See these related products for more information: •••••

- Order Management
- Transportation
- Advanced Pricing Configurator
- Release Management
- Mobile Supply Chain Applications
- Oracle Project Manufacturing
- Oracle Shop Floor Manufacturing



Warehouse Control Board – Task Planning

**Material Workbench**

Oracle WMS provides a Material Workbench to view the current status of the warehouse, to perform a variety of warehouse transactions and to find out availability for a given item.

**Active Alerts, Notification Messaging and Workflow Exceptions**

These Oracle WMS capabilities improve the efficiency of business operations by configuring real-time alerts and workflow-based notifications of supply chain exception events. For example, the user may configure an alert that notifies personnel of material shortage conditions. User definable corrective action workflows may be triggered by any task that is not completed as requested (e.g. put locator on hold and cycle count after a short pick). Oracle WMS task dispatching engine includes a set of predefined exception messages and transaction reasons that handle all of the exceptions during task dispatching, and will trigger a set of actions and workflows, based on these exceptions. A corrective action workflow might notify the warehouse supervisor, request a cycle count or place a location on hold..

**Reporting**

Oracle WMS provides a variety of both operational performance and analytical information reports.

**Oracle E-Business Suite—The Complete Solution**

Oracle E-Business Suite enables companies to efficiently manage customer processes, manufacture products, ship orders, collect payments, and more—all from applications that are built on a unified information architecture. This information architecture provides a single definition of customers, suppliers, employees, and products—all aspects of business. Oracle E-Business Suite enables sharing unified information across the enterprise to make smarter decisions with better information.

**KEY FEATURES**

**Flexibility to Support Your Business**

- Integrate with key applications**
- Inventory

**Manufacturing Integration and Value added Services**

- Mixed-mode Manufacturing
- Manufacturing Component Issues

<ul style="list-style-type: none"> <li>• Work In Process</li> <li>• Quality</li> <li>• Purchasing</li> <li>• Order Management</li> <li>• Shipping Execution</li> <li>• Flow Manufacturing</li> <li>• <i>Shop Floor Management</i></li> </ul> <p><b>Inbound Logistics</b></p> <ul style="list-style-type: none"> <li>• Mobile (RF) and Bar-coding support</li> <li>• Flexible Rules Based Business Logic</li> </ul> <ul style="list-style-type: none"> <li>• Inbound Processes (non-ASN, ASN, Inspection of Supplier Shipments Internal Transfers and Customer Returns)</li> <li>• Directed Picking, Put Away and Replenishment</li> </ul> <p><b>Outbound Logistics</b></p> <ul style="list-style-type: none"> <li>• Automated Task Dispatching, Task Management and directed picking</li> <li>• Outbound Processes (Pick, Pack, Ship, Dock Assignment)</li> <li>• License Plate Control and Container Management with Nesting and ASN Integration</li> <li>• Cartonization &amp; Consolidation</li> <li>• Customer Compliance Labeling</li> <li>• Just in time shipment</li> <li>• Opportunistic Cross Docking</li> <li>• Trip and Dock planning</li> <li>• Assembly, Kitting, Flow Manufacturing)</li> <li>• Integration Kit to Material Handling Systems</li> <li>• Real-time or Background Transaction Processing Field Level Validation</li> <li>• Pick and Put away Support for Manufacturing Facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Completions to Inventory and Cross-Docking</li> <li>• Kitting/Dekitting</li> </ul> <p><b>Performance Management Tools</b></p> <ul style="list-style-type: none"> <li>• WMS Control Board</li> <li>• Material Workbench</li> <li>• Active Alerts, notification messaging and Workflow Exceptions</li> </ul> <p><b>Advanced Inventory, Storage and Facility Management</b></p> <ul style="list-style-type: none"> <li>• Advanced Lot and Serial Control and Genealogy</li> <li>• Material Status Tracking and Control</li> <li>• Advanced Material Ownership Tracking and Costing Independent of Physical Location</li> <li>• Management of Finished Goods, Raw Materials, and Intermediate Assemblies</li> <li>• Consigned Inventory</li> <li>• Vendor Managed Inventory</li> <li>• Cycle Counting &amp; Physical Inventory</li> <li>• Kanban Management</li> <li>• Inter-Organisation Transfers</li> </ul> <p><b>Reverse Logistics</b></p> <ul style="list-style-type: none"> <li>• Return Material Authorizations (RMA)'s and supplier returns</li> </ul> <p><b>Major Benefits</b></p> <ul style="list-style-type: none"> <li>• Elimination of WMS integration issues</li> <li>• Increased Mobility and Flexibility</li> <li>• Real-time Inventory Information</li> <li>• Duplicate Data Entry Eliminated</li> <li>• Reduced Data Entry Errors</li> <li>• Increased Productivity and Reducing Costs</li> <li>• Increased Inventory Accuracy</li> </ul>
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