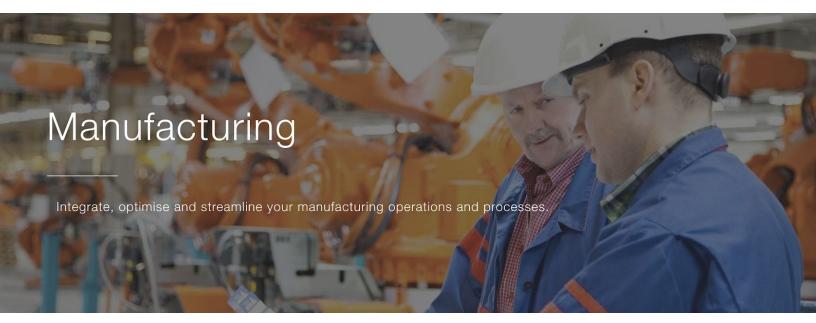


# AVT Oracle NetSuite Manufacturing Solution Overview









# Your unfair advantage -

Integrated Solutions for Manufacturers wanting a complete ERP, CRM, HCM and Ecommerce Platform.

Inventory Control > Production Planning > Product Availability > Production Control > Customer Service > Comprehensive, Real-time View > Shipping Management > Financials and Budgeting > Aftermarket Support > Sales Support

# KEY AUTOMATIONS FOR MANUFACTURERS



Production Engineering & Scheduling



Work Orders



Assembly Management



Bill of Materials



Shop Floor Control



Manufacturing Cost Control



Lot & Serial Control



Real time dashboards, analytics, reporting & planning



Sophisticated Procurement, Inventory & Fulfilment Management

# INTEGRATED FINANCIALS MANAGEMENT/ERP



Poweful Financial Management



End to End Order to Cash Management



Multinational & Multi-Company Management



Integrated Ecommerce Capabilities for Manufacturers



Sales & Marketing Service Automation



Suitecloud Platform

# Solution Benefits

Improve Business Innovation

Streamline Make to Order and Make to Stock Operations
Track Visibility on Factory performance
Implement standards across manufacturing operations
Implement Production Planning, Scheduling and Tracking
Reducing Production Risks
Improve productivity and efficiency
Improve reporting
Reduce Operational revenue leakage
Reduce errors

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# **ERP SOLUTION OVERVIEW**

# **ENGINEERING**

- Item Management
- BOM Management
- Indented BOM Inquiry
- Revision Control
- Default & Alternate Routings
- Project Management
- PLM360 Integration

### **PLANNING**

- Demand Planning
- DRP (multi-location planning)
- Flexible Lot Sizing
- Available To Promise
- Forecast Consumption
- Planning Messages
- Real-Time Calculations
- Actual or Forecasted Demand



#### WORK ORDER MGMT

- Mass Create, Release
- Option to Link to Sales Orders
- Multiple Statuses
- Materials Pick Lists
- Interactive Dispatch List
- Customizable Traveler
- Verification before Release

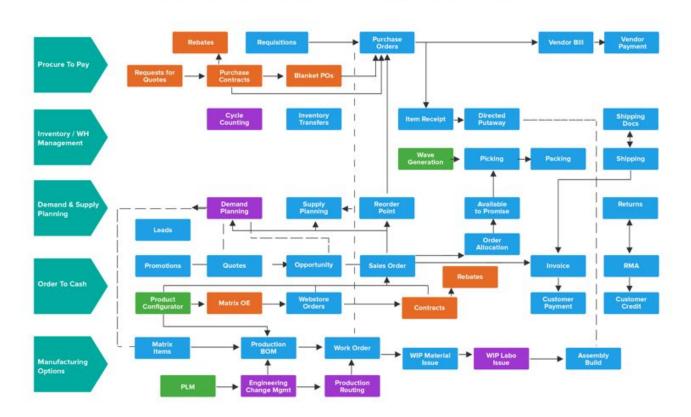
#### EXECUTION

- Barcode or Tablet Driven
- Receiving Inspection
- Inspection Plans & Quality Control
- Downtime Tracking with Reason Codes
- Real Time Performance Metrics
- Incentive Compensation Tracking
- Unbuild Assemblies for Repair

#### COSTING

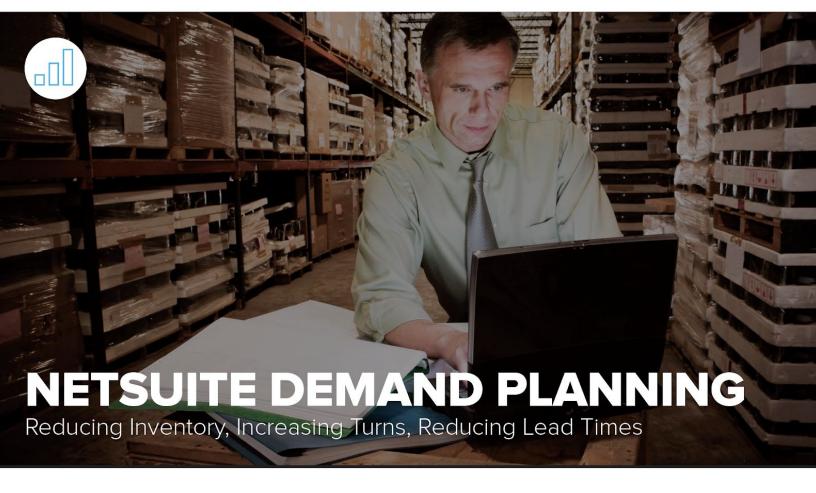
- Average, LIFO, FIFO, Standard and Specific Costing Methods
- Planned Cost By Version
- Rollup Standard Cost
- Task List
- Labor & Machine Overheads
- Variance Reporting

# HELPING YOU BRING STRUCTURE FROM CHAOS



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# Netsuite Demand and Supply Planning

NetSuite was built to support the needs of product-based businesses from its beginning and today offers a variety of native features, functions and processes to help these businesses to have the right materials available—at the right time—in the right place.

One of these key features is our native demand planning module that is specifically designed to provide the user with the ability to predict required inventory based on historical demand or sales forecasts. This innovative tool offers the right balance of powerful functionality and ease-of-use to help you manage your inventory more efficiently.



The Demand Planning Process

### **Multi-Location Inventory**

One of the key features that NetSuite delivers is the ability to easily define multiple inventory locations with real-time visibility. Locations can be organized hierarchically, and for global businesses the country can be defined. During the planning process, the system can be set up to automatically create transfer orders between locations where necessary.

#### **System Setup**

Demand Planning and Distribution Resource Planning need to be enabled in your account in order to be available to users and there are a number of other settings that affect how the system behaves.

**Item Setup** One of the most critical areas to the planning process is defining the parameters that affect each item. The settings that are found in the Inventory Management section of the item apply to the item as a whole unless they are over-ridden in the location sublist. This defines the item as being available to demand planning, establishes an alternate source item (if you are trying to plan a new item with no sales history) and establishes which Distribution Network and Category it might belong to if you are using our DRP functionality.

On the Location sublist is where you will find a lot of additional planning parameters that affect either how demand is evaluated or how the planned orders are generated.

These settings include:

- Safety Stock
- Let Sizing Method
- Fixed Lot Size
- Supply Planning Periods
- Supply Type
- Demand Source
- Forward and Backward Consumption Days
- Demand & Planning Time Fences
- Reschedule In/Out Days

# **The Demand Planning Process**

Now that the items have been set up as desired, the system can evaluate demand and present it in a number of ways. The menu structure is laid out in a way that shows the process to calculate demand, review the demand plans and edit where required, generate the supply plans, review and edit those and finally generate planned Purchase Orders, Transfer Orders and Work Orders as desired. Note that the system can be set up to generate actual transactions and skip the planned orders if desired.

### **Available Planning Methods**

*Linear Regression* — Use previous demand to project future inventory based on the ordinary-least-square regression method.

Moving Average – Use the moving average of historical demand to calculate the overall average stock level needed, and then project future stock levels using that overall average.

Seasonal Average – Use previous demand to examine the seasonal trend of inventory flow, and then project a similar seasonal trend for future stock levels.

Sales Forecast – When using NetSuite for your sales operations, this option uses forward looking sales forecast data (such as opportunities, estimates, etc.) to project inventory demand.

**Demand Plans** Once the demand plans have been generated, the user can easily modify them to include any known exceptions. This essentially becomes your MPS.

**Supply Plans** Now that the demand plans have been generated and edited, creating the supply plans is a simple one-click process using the item settings to control how the orders are created. Depending on some parameters and approval workflows, the system will either generate planned, firm or released orders.

**Planning Action Messages** NetSuite can also generate planning messages to assist the user in making the right decisions and optimize inventory levels where appropriate.

# **Gross Requirements Inquiry**

The Gross Requirements Inquiry provides an overview of the progressive supply and demand cycle by listing quantities required and quantities supplied on each transaction date listed. Each transaction and date is listed along with the more-on-hand or less-on-hand quantity of the transaction, as well as the resulting total quantity on hand for the item.

#### **Order Execution**

The result of the planning process simplifies the process of creating purchase orders, transfer orders and work orders for the user and they can be notified in a number of ways when they have to do something—this includes:

- Reminders
- Email alerts
- Saved searches
- Scheduled reports

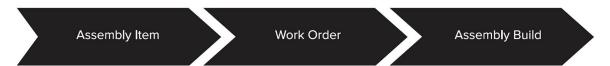
Executing these from the Order Items or Mass Create Work Order screens is a simple as checking a box beside the orders you want to create and hitting a button



# Netsuite Work Orders and Assemblies

NetSuite can be easily configured to support the needs of manufacturers of all types and sizes, and for many the first step is to implement the Work Orders & Assemblies module. Enabling this feature allows users to define assembly items, build complex multi-level bill of materials, create work orders, record assembly builds, and backflush components with minimal effort.

# **Process Flow**



# **Assembly Item**

In NetSuite, an item that is manufactured and consumes other components as part of that process is called an Assembly Item and is easily defined through the New Items menu. Assembly Items can optionally be

defined as lot numbered or serialized. If a product requires full traceability from the components being used—where they came from and where the end product went—then selecting one of these options will ensure that traceability is strictly maintained.

### **Work Order**

In NetSuite, creating a Work Order is actually an optional step in the manufacturing process; however, if you require the ability to communicate to production what you want made, when you want it, and the components they need to use, or if you sell a configurable product where there are features and options, then creating a work order is a critical part of the process. In this case, the work order is the starting point of implementing a production control system.

### **Work Order Traveler**

The traveler is a document that is printed and handed over to production to communicate the production plan. This document can also be used for them to communicate back how much raw material they actually consumed compared to what you were expecting.

#### **Work Instructions**

Instructional files can be added to the assembly item and flagged to print at the same time as the traveler. This offers a quick and easy method to issue additional information to the production team.

### **Inventory Commitment**

By creating a Work Order, NetSuite automatically commits inventory to production when the work order is created and gives a more accurate view of the current inventory status.

### **Assembly Build**

The Assembly Build transaction is the point at which the components are consumed and the finished good is created—sometimes referred to as "backflushing". It is important to note that the Assembly Build can be completed either against a work order or directly from the menu if working in a lean or work order-less environment

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# **NetSuite WIP and Routings**

Enabling NetSuite's WIP and Routings capabilities gives companies the ability to define a routing for the manufacturing process, the resources needed to complete the process, and the expected time and cost required. Routings also provide the basis for the infinite capacity scheduling engine that can help identify which resources are being over- or under-utilized. Finally, capturing the cost of materials consumed during the manufacturing process creates a complete picture of the process costs before it is finalized and committed to the GL.



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## Assembly Item

In NetSuite, an item that is manufactured and consumes other components as part of that process is called an Assembly Item and is easily defined through the New Items menu. Assembly Items can optionally be associated with lot numbers or serialized. Selecting one of these options will ensure that full traceability is strictly maintained for products that require it.

### Work Order

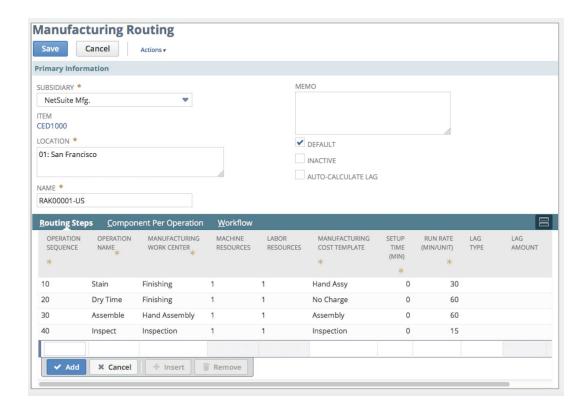
In NetSuite, creating a Work Order is actually an optional step in the manufacturing process; however, if a business requires the ability to create a schedule and communicate to production what needs to be made, when it should be made and the components to use in the process, or if you sell a configurable product where there are features and options, then creating a work order is a critical part of the process and is the starting point of implementing a production control system.

### **Work Center Management**

Before defining the manufacturing process using routings, it's necessary to set up the work centers that the routing will use. Each work center can represent a machine, person, work cell or department that is involved in the manufacturing process. This list of work centers is an integral component of the real-time scheduling engine.

# **Production Routing**

Once the work center and cost templates have been defined, the production routings can be set up to represent every step that a product goes through, the expected set-up and run times, the associated work centers, and the cost templates that should be used. This also facilitates the real-time scheduling process, which can be defaulted to forward or backward and also over-ridden on a case by case basis.



# **Manufacturing Cost Templates**

The manufacturing cost template defines the direct and indirect costs associated with an operation's routing, along with the accounts that these costs should be posted to. Every time an operation is completed, NetSuite uses the associated cost template to provide baseline form for costing the product, while still maintaining flexibility.

# Work Order Traveler/Dispatch List

The Work Order Traveler is a document that is printed and handed over to production to communicate the production plan, routing steps and schedule. It can also be used to communicate back how much time each operation took and the amounts of raw material actually consumed compared to what was anticipated. The Dispatch List, on the other hand, provides a detailed list of materials that are required for a work order



# **Inventory Commitment**

Creating a Work Order activates NetSuite's ability to automatically commit inventory to production when the work order is created to provide an accurate, real-time view of inventory status.

### **Work Order Management**

The WIP and Routings module also adds statuses to the Work Order itself, allowing for a more finite level of control over when and how work orders are released to production as well as clearer visibility on production status including Open Planned, Firm Planned, Released, In-Process and Complete Closed.

Mass update screens are available to enable production controllers to keep on top of the statuses and make mass changes based on a wide range of criteria, including customer, item and due dates. These statuses can also be updated using the workflow engine for a more automated process

#### **WIP** Issue

The WIP Issue transaction manually issues materials to the Work Order—and into WIP—as they are consumed. This is especially valuable for manufacturing products that take longer to complete and have several work orders open over month end.

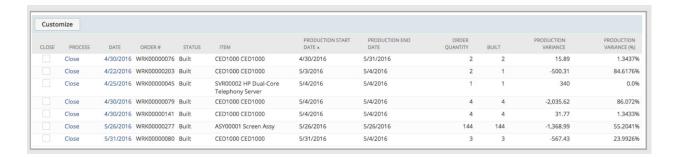
# **Work Order Completion**

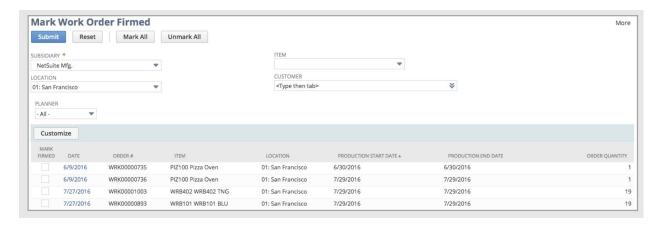
The completion transaction serves several purposes: Recording labor against an operation Issuing materials Recording scrap, Reporting completed products.

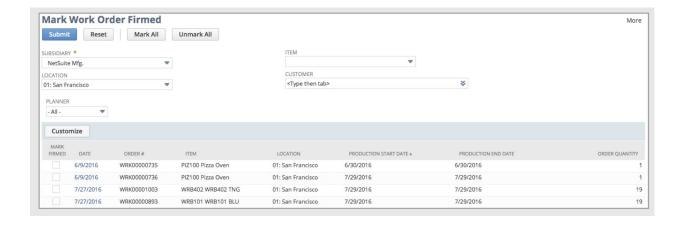
NetSuite has a two-step closing process for work orders, with the completion being the first step. This is typically done by someone in production and indicates when a product is actually completed and available to be added to inventory

#### Work Order Close

The second part of the process is the work order close. This allows cost accounting, production and finance teams to work together and preview the costs that have been applied to each Work Order before committing the costs to the GL









Designing, manufacturing, distributing and selling a product of high quality doesn't happen by accident, it requires a company-wide commitment to enforce policies and standards. NetSuite's Quality Management Solution has been designed to help you deliver the highest quality in your products with minimal overhead regardless of the size and complexity of your business and product line.

## Inspections

The inspection record defines exactly what it is that you want your quality engineer to check. These inspection records can be re-used so, for example, you only have to create a "check for material certificates" inspection once—these are later grouped into specifications that are then applied to items, etc. There are currently two main types of inspections that are supported.

With qualitative inspections, the inspector can verify that the item is in good overall condition or verify that the appropriate certificates are in place.

Quantitative inspections, on the other hand, allow you to define multiple measurable elements along with criteria for acceptance, i.e. diameter, width, length, temperature or even chemical composition.

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# **Skip Lot, Sample Size and Failures**

Within each inspection, you can also specify how many items need to be inspected and define rules for inspecting specific sequences of lot or serial tracked items. Failures then define how many of the inspected units can fail inspection before the inspection itself is failed—kicking off the non-conformance workflow.

### **Test Definition**

Each inspection can be set up with multiple data elements that define the parameters of the inspection process.

Data Fields define the information that must be entered during the inspection, i.e. length, width and height Standards fields are then established to define how the data field should be compared to a standard.

Rules then establish how the data field entries should be compared to the standard and determine pass/fail. One of the benefits of this approach is that it allows the user to define a single inspection and have item specific standards.

# **Specifications**

The specification record groups related inspections to establish quality activities. So, for example, when receiving some raw materials, you might confirm dimensions as well as verify that the appropriate certification is present. Additionally, the specification record allows the user to:

- Associate specifications to item/vendor/ location combinations.
- Define inspection frequency via settings for skip-lot, sampling and more.
- Define conformance rules that establish when an item fails an inspection.
- Display error messages that describe where and why updates failed.

#### **Automatic Triggering of Inspections**

Based on item/vendor/location associations, NetSuite item receipt transactions are monitored and can initiate inspection activities with different rules for each.

\*In an upcoming release, inspections will be able to be triggered from manufacturing routing steps to capture in-process quality results.

## **Inspector Assignment**

Once an item has been identified as requiring inspection, an entry is made into the inspection queue where an individual quality engineer can be assigned to perform the task. Workflows can be utilized to automatically assign inspectors based on location, vendor, inspection type, etc.

**Perform Inspections via Tablet** The quality tablet interface enables quality engineers to perform inspections, review standards, record data and submit data for analysis directly from the inspection area providing real-time feedback and instant access to test results.

Once the user selects an inspection, they are walked through capturing the results and get real-time feedback where there are issues

# **Workflow Driven Non-Conformance**

Quality failures, or non-conformances, can drive additional activities within NetSuite through customizable workflows—the application provides initial workflows for:

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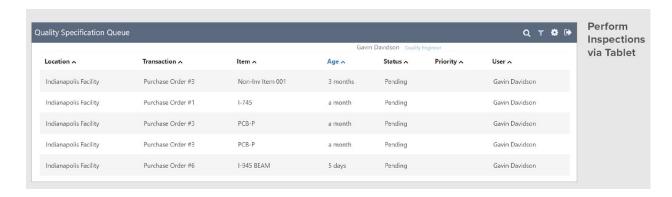
Quarantine and Release Initiation of Vendor Return Authorizations

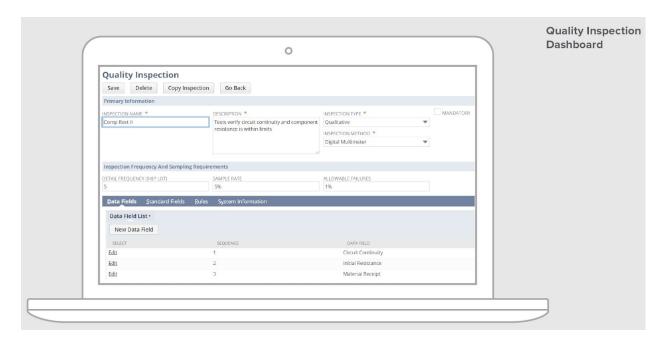
#### **Roles**

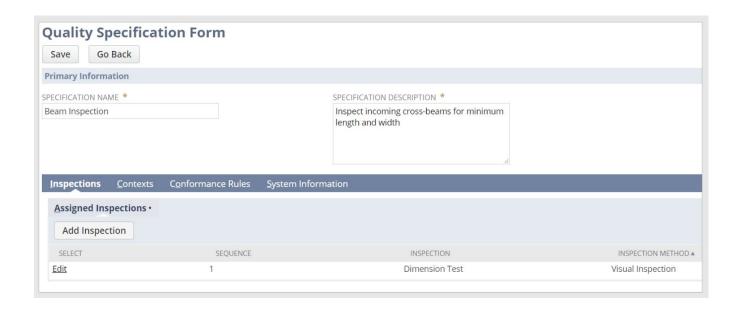
The system comes with three distinct roles that are assigned to existing users:

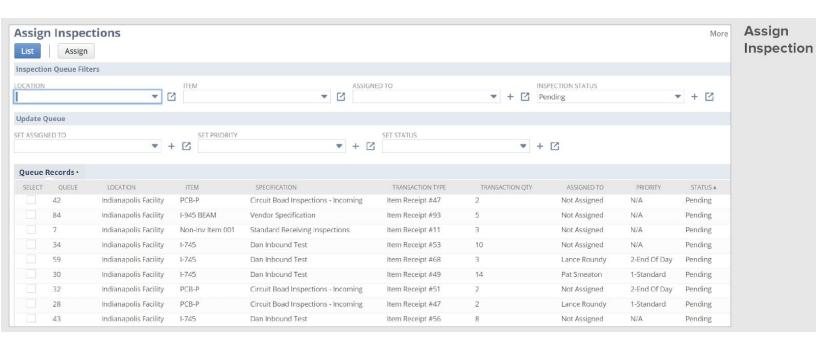
Quality Administrator: Responsible for setup and maintenance of quality specifications, context checks and workflow.

- · Quality Manager: Responsible for monitoring and managing quality execution and reporting.
- Quality Engineer: Responsible for quality data collection.











# **AVT Modules for Oracle Netsuite Manufacturing**

# **BOM Configurator**

- Framework to manage Model, Classes, Products, Features and Options
- Manage BOMs components using a graphical interface
- Mass update Assemblies and create new BOM revisions
- Search and find Assemblies using features and options
- Automate Revision control generation
- Evaluate BOM Costing
- BOM Enquiry
- Create BOM CSV export across multiple Assemblies

# **Product Selector**

- Sales tool to Search for Pre-configured Assemblies
- Search and Find Assembly based on Features and Options
- Create Opportunities and Quotes
- Input Tailoring Instructions
- Estimate Margins and Costs

# **Production Scheduling**

- Production Board & Drag and Drop Scheduling
- Capacity Board and Workload Management



- Estimate Time to Manufacture
- Release Work Orders to Shop-floor
- Estimate time to Delivery and Planned vs Actuals
- Automatic creation of operations based on Assembly Routings
- Auto assignment of operations based on capacity and workload
- Track factory workload
- Assembly Costing

# **Shop Floor Control**

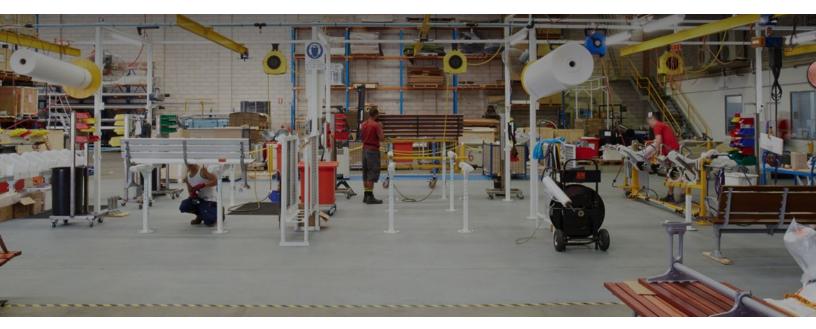
- Create visibility and control across factory floor
- View Work Order Operations using Tablets and Responsive Interface
- Track time on Operations
- Display Instructions on Operations
- Touch interface to Capture notes and and time entry
- Attendance Management
- Utilisation Tracking

# Job Management

- Group Work Orders on a single project
- Link project to multiple customers
- Job Tracking
- Reporting

# **Customer Success**

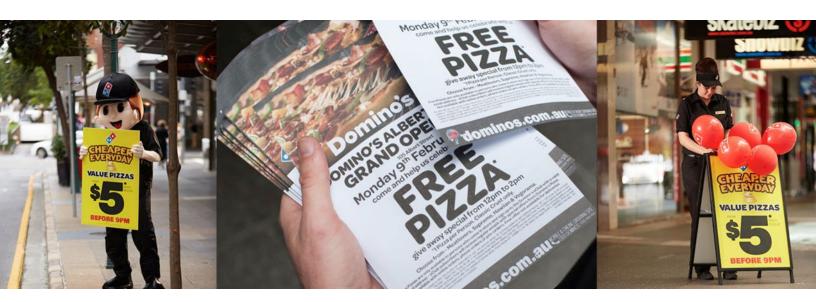














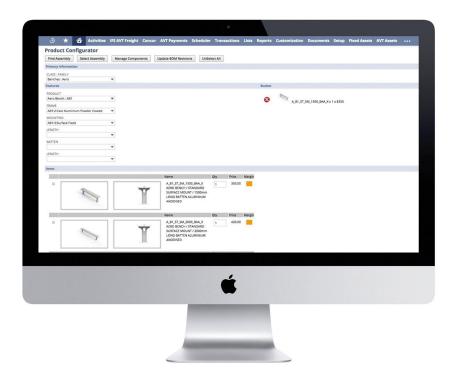
# COMMERCIAL AND INDUSTRIAL wood energy products

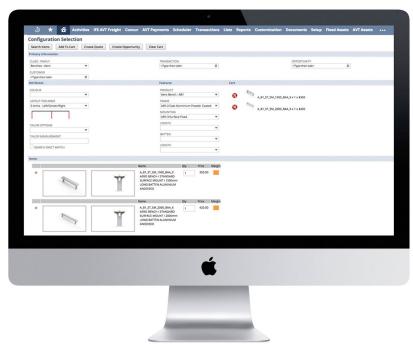


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# **AVT PRODUCT CONFIGURATOR & SELECTOR**



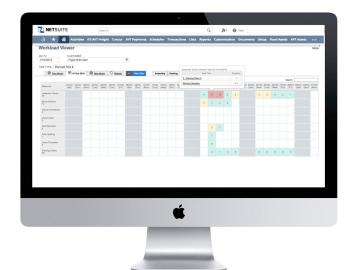


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# AVT PRODUCTION SCHEDULERS









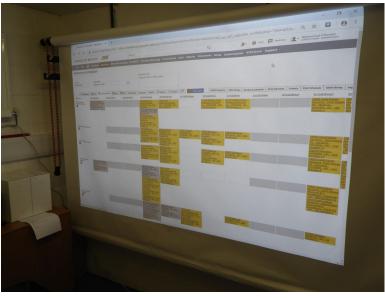


# SHOP FLOOR MANAGEMENT









Module & Service Charges	Costs Per Annum
NetSuite Manufacturing Edition	POA
AVT Product Configurator & Selector Annual Subscription - BOM Configurator - Assembly Selector	POA
AVT Light Manufacturing Suite Annual Subscription - Production Scheduling - Item Routings - Work Order Release Automations - Work Order Routing Automations - Reports - WorkCentre Management	POA
AVT Production Schedulers Annual Subscription - Production Schedule viewer - Drag and Drop Scheduling - Workload Viewer	POA
AVT Shop floor Management Annual Subscription	POA
AVT Attendance Management Annual Subscription	POA
AVT Projects - Job Management	POA

<sup>\*</sup>If you require assistance around NetSuite process consulting, please contact <a href="mailto:sales@abvt.com.au">sales@abvt.com.au</a> to get a separate quote.

AVT HAS OVER 10 YEARS OF SUCCESS WITH OVER 500+ BUSINESS & PROCESS IMPROVEMENTS Focused on Manufacturing, Wholesale and Distribution verticals, we focus on effective and simplified processes through NetSuite cloud ERP, helping you to make faster and better decisions.