



NetSuite Demand Planning Overview

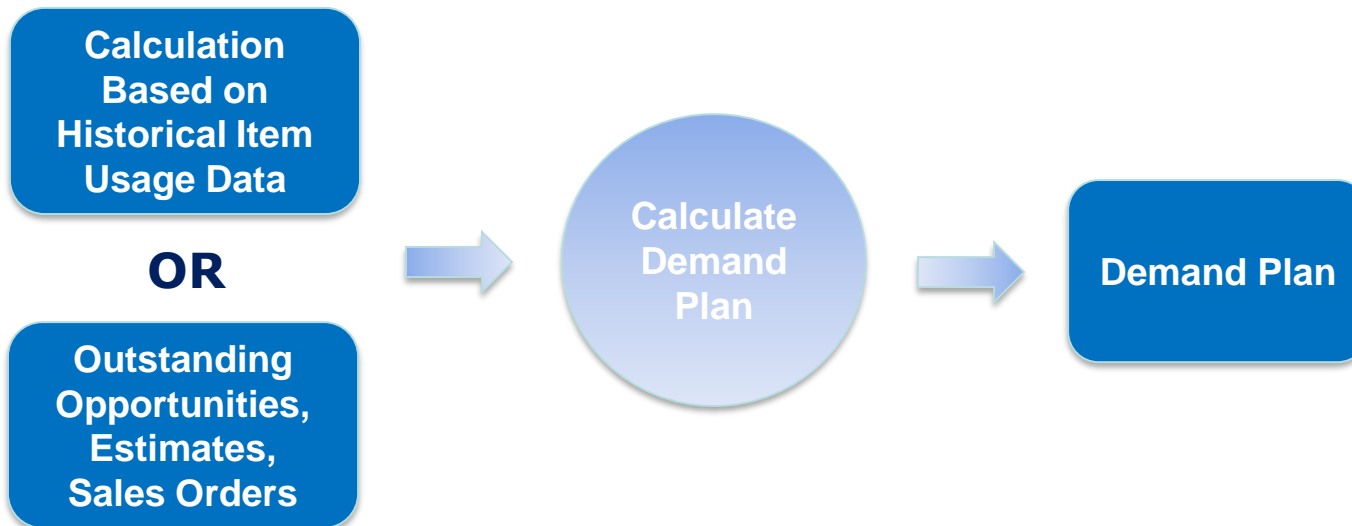
Transforming Your Business Process Flow with NetSuite

Demand Planning



N *A demand plan calculates the projected sales in coming months:*

- N** Reviewed at a per subsidiary, location, & item level
- N** Projection & Historical Duration – weeks & months
- N** Calculates Quantity – Ability to Override Quantity
- N** Ability to import external Demand



Supply Planning

N *A supply plan is a list of daily ordering recommendations based on the following:*

- N** Outstanding Transactions (Purchase Orders, Work Orders, Transfer Orders)
- N** Safety Stock
- N** Lead Time
- N** Item Demand



- N **Calculate projected sales for upcoming months:**
 - Based on Historical Item Usage
 - Outstanding Opportunities/Estimates/Orders
- N **Per Location/Item Levels:**
- N **Various Methods:**
 - Linear Regression (Trending)
 - Moving Average
 - Seasonal Average
 - Sales Forecast (Opportunities/Estimates/Orders)
- N **Items or Assemblies:**
 - Top Level Assembly – recalculates all components within BOM
 - Build to Order
 - Build to Stock

N **Supply Plan Sourcing Options (on item record):**

- Assemblies can be Purchased or Built based on setting
- Supply Source “Purchase”, system generates Purchase Order recommendations
 - Time Phased Supply Planning
- Supply Source “Built”, system generates Work Order recommendations

N **Supply Plan for Assembly Items:**

- If assembly is selected, system recalculates all components associated in BOM
- If component is selected, all associated assemblies & their associated components in BOM structure selected for calculations
- Recommended Purchase Orders & Work Orders

N **Work Order (Quantity Based Lead Time):**

- Enter Lead Time required to produce 1 unit of an assembly in base unit
- In Supply Plan Calculations, lead time based on (Qty. x WO lead time)
- Work Order – end date calculated (if blank) based on quantity, WO lead time, and start date at save time.
- Work Order – start date calculated (if blank) based on quantity, WO lead time, and end date at save time

Linear Regression Projection Method

- Based on the historical duration parameter, the system will group the data points into weekly or monthly buckets, a linear line is then created based on the "TREND".
 - Often used to identify item trending

- Example:
 - Today is 2/1/2011
 - Historical duration to 3 months
 - Projected duration to 2 months

	10/1/2010	11/1/2010	12/1/2010	1/1/2011	2/1/2011	3/1/2011
Historical Demand Data	10	11	13	15		
Projected Demand Data					17	19

Moving Average Projection Method

- Based on the historical duration parameter, the system will calculate average of demand in the past
- This average is used for all periods in the projection
- It is a smoothing function to remove any demand variation in the system
- Example:
 - Today is 2/1/2011
 - Historical duration to 3 months
 - Projected duration to 2 months

Average of the last 3 months is 5. 5 is used for all projected periods.

	10/1/2010	11/1/2010	12/1/2010	1/1/2011	2/1/2011	3/1/2011
Historical Demand Data	5	4	5	6		
Projected Demand Data					5	5

Seasonal Average Projection Method

- System calculates a weighted index for each of the 12 months in the last year
- Annual projection for the next 12 months is multiplying the historical annual total in the last 12 months with the expected demand change field on the item record
- Each of the projected months is then calculated by using the annual projection for the last 12 months with the weighted index
- Example: *(Projected annual demand is total demand for the last year * expected demand change)*
 - Today is 2/1/2011
 - Historical duration to 12 months
 - Projected duration to 12 months
 - Expected Demand Change: 20%

	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Total
Historical Demand Data	50	10	10	10	10	10	10	10	110	80	80	10	400
Weighted Index	0.125	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.275	0.2	0.2	0.025	1

Weighted Index is calculated by using total demand for Feb/ total demand for last 12 months

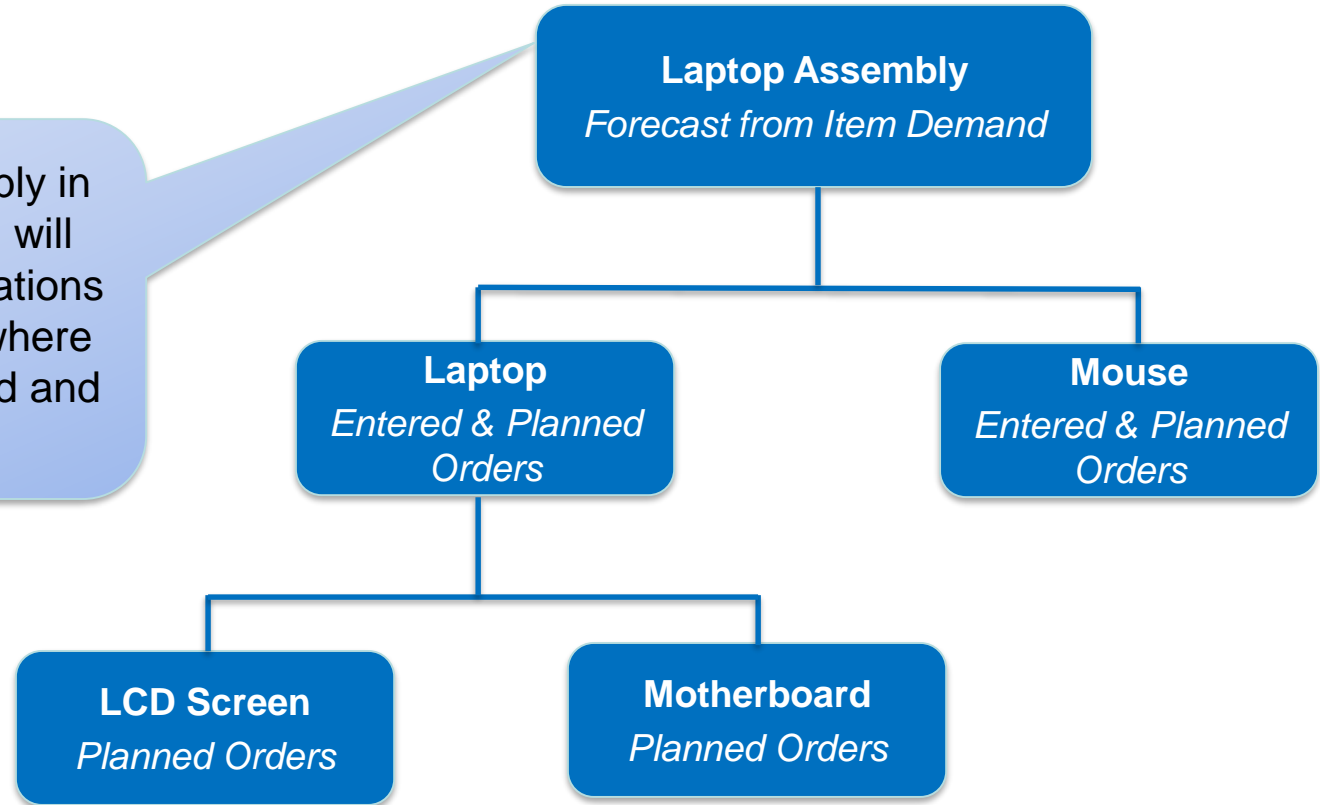
Sales Forecasting Projection Method

- Out of the box capability to connect front office & back office in demand management
- Projection based on anticipated sales from CRM activity
- Great tools for Build to Order Industries
 - For Production Managers & Buyers who want visibility of expected estimates & opps
 - A way to minimize drastic changes on the shop floor and purchasing

Transaction Type	Date	Quantity
Estimate *estimates without any associated sales orders, invoices, or cash sales	Expected Ship Date Note: Data is not referenced when an expected ship date is not populated.	Estimate Quantity
Opportunity *opportunities without any associated sales orders, invoices, or cash sales	Expected Ship Date Note: Data is not referenced when an expected ship date is not populated.	Opportunity quantity
Sales Order	Expected Ship Date Note: If an expected ship date is not listed, then the Transaction Date is used.	Quantity remaining that is not yet shipped
Item Fulfillment *Only for fulfillments associated with a sales order	Transaction Date	Quantity Shipped
Cash Sale *standalone cash sales *cash sales created from estimates *cash sales created from sales orders when Advanced Shipping is disabled	Transaction Date	Cash Sale Quantity
Invoice *standalone invoice or invoice from estimate *invoice created from estimate *invoice created from sales order when advanced shipping is off	Transaction Date	Invoice Quantity

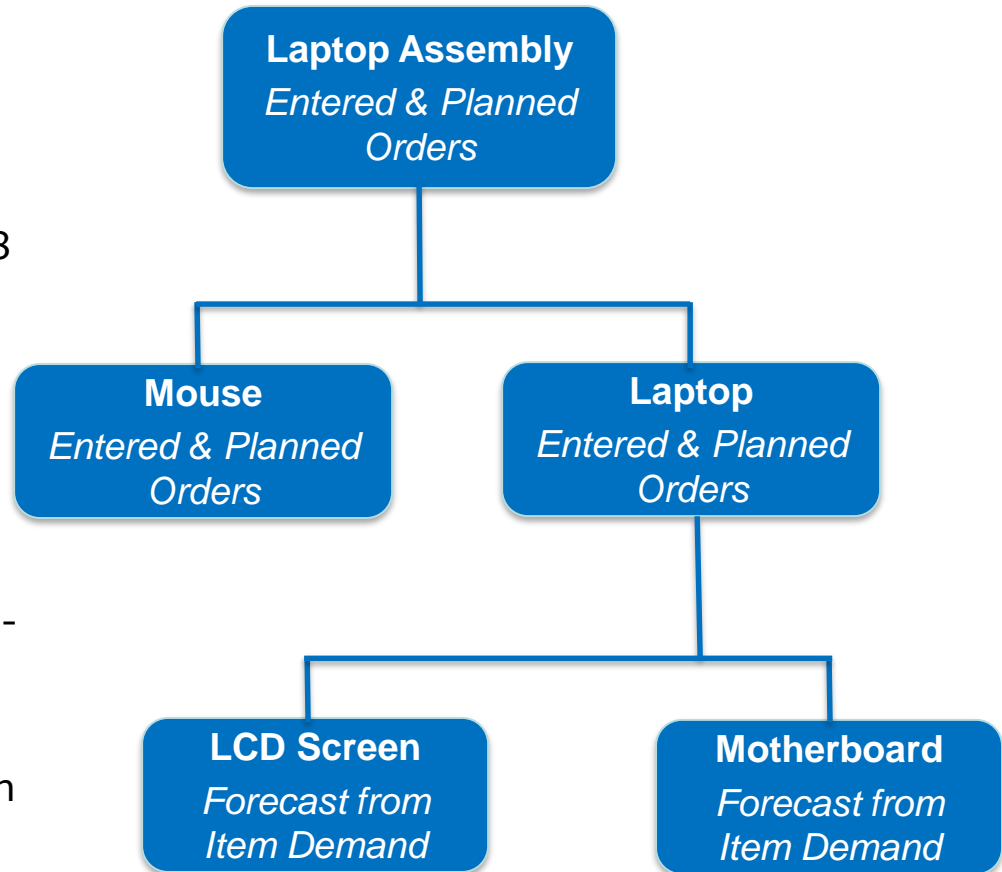
Top Level Assemblies in Calculations

Selecting Laptop Assembly in Supply Plan Calculation will trigger supply plan calculations for all sub-components where demand source is entered and planned orders



Demand Planning (Build to Order)

- Sales Order created some Laptop Assembly on 4/1
- ↓
- Work Order Recommendation
 - End Date is 4/1
 - Start Date is 3/28
 - Assembly is a supply on 4/1
 - Component is a demand on 3/28
- ↓
- Work Order Recommendation
 - End Date is 3/28
 - Start Date is 3/26
 - Assembly is a supply on 3/28



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- Demand Forecasting is used for LCD Screen & Motherboard
 - Purchase Orders are created based on Item Demand Record

Demand Planning (Build to Stock)

- Demand Forecasting on Laptop Assembly with Demand on 4/1

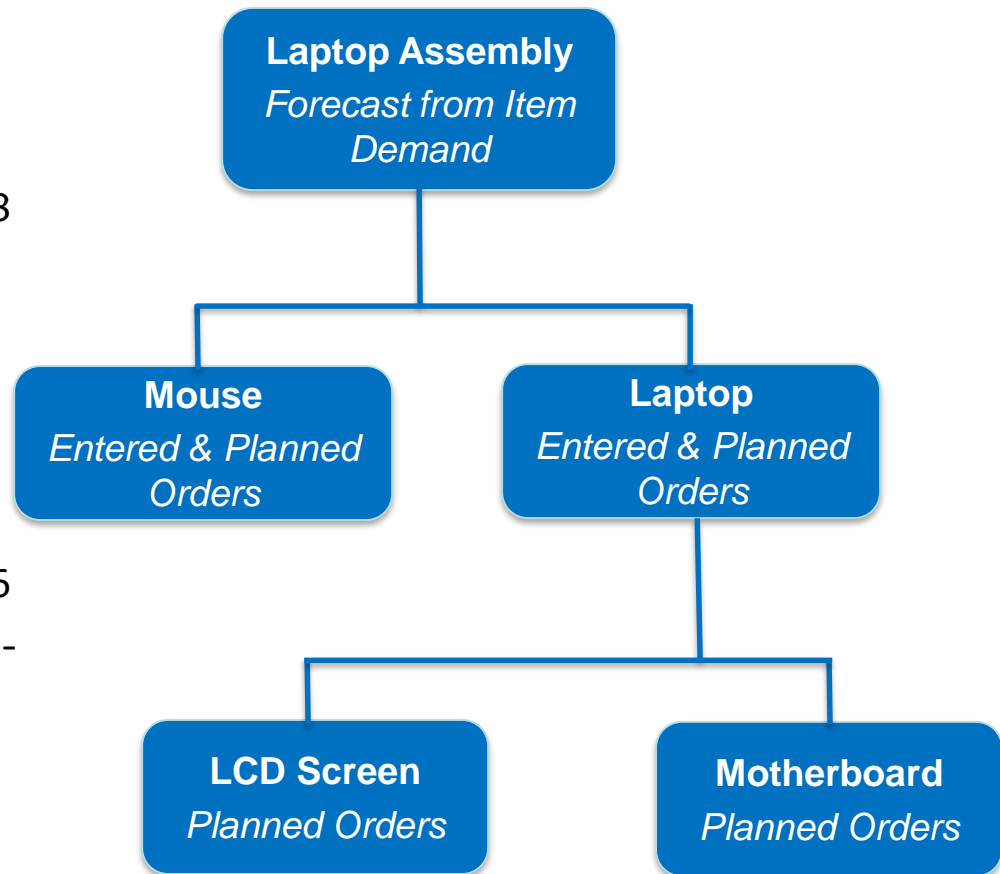


- Work Order Recommendation
 - End Date is 4/1
 - Start Date is 3/28
 - Assembly is a supply on 4/1
 - Component is a demand on 3/28



- Work Order Recommendation
 - End Date is 3/28
 - Start Date is 3/26
 - Assembly is a supply on 3/28
 - Component is a demand on 3/26

-
- Purchase Order is created with:
 - Required date on 3/26
 - And Order Date of 3/1



Supply Plan for Assembly Items

- Recommended orders created with:
 - Purchase Orders:
 - Order date is date PO must be submitted to Vendor
 - Required date is date items must be received in warehouse to meet this demand
 - Work Orders
 - Production Start Date
 - Date when Production Begins
 - Date when components are required on-site
 - Production End Date
 - Date when assemblies are built

Time Phased Supply Planning Example:

Safety Stock 5

Lead Time 3

Week	1	2	3	4	5	6	7	8	9	10
Gross Requirement	0	0	0	2	3	50	3	3	3	3
Safety Stock	5	5	5	5	5					5
Total Demand	5	5	5	7	8					

Purchases	0	0	0	0	0					0
Beginning Inventory	8	8	8	8	6					
Total Supply	8	8	8	8	6					

NET	3	3	3	1	-2					
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if Net < 0, set quantity					Order
Order Quantity	0	0	0	0	2
Order Period	0	0	0	0	2

Ending Inventory Level	8	8	8	6	5					
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Short of Supply
Create an order for 2
Place it in period 5

With the addition of this new order, the inventory level is maintained at the safety stock level

Demand Planning Examples

Sales Forecasting Sample

Sales Forecasting Example

Opportunities defined in System with Due Date & Location

Opportunities Inline Editing

New	Edit View	Title	Number	Customer	Sales Rep	Date	Expected Close	Opportunity Status	Probability	Forecast Type	Projected Total	Location
	Edit View		118	Smith Supplies	A Wolfe	5/13/2011	5/26/2011	Purchasing	90.0%		108.00	Boston
	Edit View		117	Smith Supplies	A Wolfe	5/13/2011	6/2/2011	In Negotiation	75.0%		270.00	Boston
	Edit View		116	Smith Supplies	A Wolfe	5/13/2011	7/1/2011	In Negotiation	75.0%		108.00	Boston
	Edit View		115	Smith Supplies	A Wolfe	5/13/2011	6/25/2011	In Negotiation	75.0%		225.00	Boston
	Edit View		114	Smith Supplies	A Wolfe	5/13/2011	8/2/2011	Purchasing	90.0%		315.00	Boston
	Edit View		113	Smith Supplies	A Wolfe	5/13/2011	7/21/2011	In Negotiation	75.0%		180.00	Boston
	Edit View		112	Smith Supplies	A Wolfe	5/13/2011	6/28/2011	In Negotiation	75.0%		135.00	Boston
	Edit View		111	Smith Supplies	A Wolfe	5/13/2011	7/5/2011	Opportunity Identified	75.0%		630.00	Boston
	Edit View		110	Smith Supplies	A Wolfe	5/13/2011	6/24/2011	Opportunity Identified	75.0%		945.00	Boston

Calculate Item Demand Plan (Demand Item)

Calculate Item Demand Plans

*Location

*Projection Method

*Projection Interval

Projection Start Date

*Projection Duration Months

Historical Analysis Duration Months

Select each item to calculate forecast demand.

Select	Item ▲	Alternate Source Item	Last Plan Modified	Last Projection Method
<input checked="" type="checkbox"/>	Demand Item	<Type then tab> <input type="button" value="v"/>	5/13/2011 1:12 pm	Sales Forecast

Sales Forecasting Example

Demand Results – ability to manually override

◀ ▶ **Item Demand Plan: Demand Item**

Edit Back More Actions ▾

Primary Information

Location Boston	Unit of Measure
Item Demand Item	Memo

Last Calculated Information

Projection Method Sales Forecast	Projection Duration 3
Projection Interval Monthly	Historical Analysis Duration
Projection Start Date 5/1/2011	Alternate Source Item

Demand Workflow

Year 2011	Month ▾	Start Date 1/1/2011	End Date 12/31/2011	View Monthly ▾	
Start Date	End Date			Monthly Calculated	Quantity
1/1/2011	1/31/2011				
2/1/2011	2/28/2011				
3/1/2011	3/31/2011				
4/1/2011	4/30/2011				
5/1/2011	5/31/2011			75	75
6/1/2011	6/30/2011			62	62
7/1/2011	7/31/2011			12	12
8/1/2011	8/31/2011				
9/1/2011	9/30/2011				
10/1/2011	10/31/2011				
11/1/2011	11/30/2011				
12/1/2011	12/31/2011				

Sales Forecasting Example

Generate Item Supply Plan

Generate Item Supply Plan

Submit

* Location * End Date

Start Date 5/16/2011

Mark All Unmark All Customize

Select	Item	Last Modified Date
<input checked="" type="checkbox"/>	Demand Item	5/13/2011 1:13 pm

Submit

Supply Plan Results

Item Supply Plan: List Search Gross Requirements Inquiry

Item Supply Plan: Demand Item

Edit Back More Actions ▾

Location Unit of Measure

Item

Orders **Workflow**

Order Date	Receipt Date	Order Type	Quantity	Order Created
6/17/2011	7/1/2011	Purchase Order	12	

Sales Forecasting Example

Gross Requirements Inquiry

Gross Requirements Inquiry

Location
 Item

Unit of Measure
 Safety Stock Level 1

Date	Order Date	Type	Quantity	Quantity On Hand
5/16/2011		Beginning Inventory		2
6/1/2011		Entered Supply Orders	61	63
6/1/2011		Forecast from Demand Plan	-62	1
7/1/2011	6/17/2011	Planned Purchase Order	12	13
7/1/2011		Forecast from Demand Plan	-12	1

Order Items – Recommended PO's & WO's

Order Items

Location
 Replenishment Method
 Order Start Date
 Order End Date

Vendor
 Include Items with No Preferred Vendor
 Include Items where Vendor is not Preferred
 Parent Item

Minimum Quantity
 To Be Printed
 To Be Emailed
 To Be Faxed

Total 9045

Order	Order Date	Receipt Date	Replenishment Method	Location	Item	Description	Vendor	Currency	Units	Available	Back Ordered	On Order	Reorder Point	Preferred Stock Level	Quantity
<input checked="" type="checkbox"/>	6/17/2011	7/1/2011	Time Phased	Boston	Demand Item		American Suppliers	USA		2	0	61			12
<input checked="" type="checkbox"/>	5/16/2011		Reorder Point	Boston	Custom HP Media Home Server	HP Dual-Core Telephony Server	HP Corporation	USA		0	0	0	2	5	5

Any Questions ?



Demand Planning

- You can use the Demand Planning feature to analyze your stock demand needs, determine replenishment requirements, and then create orders according to a supply plan that will add stock as needed. This information can be crucial for items with demand that varies and fluctuates throughout the year.
- You can pinpoint when to reorder items, and in what quantities, allowing you to maintain optimal stock levels. Demand planning helps you to have the right amount of stock on hand to fill orders without having overstock sitting idle on warehouse shelves.
- Demand Planning uses demand plan and supply plan records to track anticipated supply and demand.

Demand Plans

- A demand plan records the expected future demand for an item based on previous or projected demand.
- A demand plan can be created automatically using the Calculate Demand Plan page. This page initiates the process to assess previous demand for items and calculate the estimated upcoming demand.
- You can forecast demand for items using one of the following methods:
 - Determine a time frame for examining an item’s historical sales data (or data of a different item) to analyze previous sales trends and forecast future sales with similar trends.
 - Use current demand such as opportunities, quotes and existing sales orders to forecast future sales. This method is not based on a calculated forecast. NetSuite uses this forecast data to project estimated demand across a designated time period in the future and suggests a plan for orders accordingly.

Demand Planning

Allows you to plan your inventory based on expected sales projections:

- ◆ Projections can be mathematically calculated
 - OR
- ◆ Projections can be from sales forecast (CRM module)

Note: Both options are available to support different types of business requirements

Advanced Inventory Management vs. Demand Planning

Advanced Inventory Management

- ◆ Calculates reorder points based on historical data
- ◆ Assumes that demand is constant in most cases
- ◆ Can create excess inventory (reordering based on reorder point)
 - Examples: Ordering holiday candy based on current reorder point capability may create excess inventory around the shelf throughout the year

Demand Planning

- ◆ Order based on anticipated customer demand
 - Demand can be calculated based on:
 - Outstanding CRM data (i.e. opportunities, estimates, and sales orders)
 - Projection of historical demand mathematically
 - Can use the sales history of another item for calculations

What is Demand and Supply?

Demand

- ◆ Any type of inventory usage as a result of the following:
 - Sales Related Transactions: Sales Orders, Cash Sale, Standalone Invoice
 - Work Orders and Assemblies: usage of components in assembly

Supply

- ◆ Any inventory increases in the warehouse as a result of the following:
 - Purchase Related Transaction: Purchase Orders, Standalone Vendor Bill
 - Work Orders and Assemblies: completion of assembly items

Note: Inventory adjustments entered in the system are excluded. They are mainly used to reconcile inventory to correct any inventory count inconsistencies.

Advanced Inventory Management vs. Demand Planning

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