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# Oracle Manufacturing and Financials Business Processes and Transactions

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## Introduction

This paper explains the typical business processes and transaction flow through Oracle Manufacturing and Financials from design, costing, planning, customer order, procurement, receipt of materials, payment, production, shipment, invoicing, and cash receipt for a manufacturing company with emphasis on Manufacturing. We cover integration between modules including basic journals to General Ledger and the overall period end process. Use information in this paper as a starting point to develop business process tests for your implementation project.

## Goals of Business Process Testing

Very early in your implementation, plan to setup a test environment and test various core business processes in Oracle Applications. Most Oracle documentation and training and project team organization is by module, which can lead to gaps in understanding and insufficient design and testing of integration points. Focusing on business processes can orient the entire team to the way your business functions will likely be performed on Oracle Applications from start to finish. At a very minimum, each project team member needs to understand the processes before and after the ones for which he or she is responsible and any shared data across modules.

There are several goals to business process testing. The most significant goal is to train the project team. Structured classroom training can provide a good introduction to overall functionality but it is critical to immediately follow classes with plenty of detailed hands-on testing with some realistic scenarios and data from your own business. Testing will help train the project team on the core functionality of the Oracle Applications, setup and processing options available, integration between modules, and basic accounting entries.

There are various phases of testing in Applications implementations. Plans for early business process testing can provide a baseline for subsequent phases. You can later expand these baseline test plans to cover all functionality you will use and modify scenarios based on setup and procedural changes made during design phases. You have to make many setup, design, and processing decisions as part of the implementation. Business process testing throughout the implementation allows the project team to explore setup and design options and validate decisions made.

## Scope of Business Process Testing

Start simple and plan the first phase of testing around major system functions rather than the off-line activities. You have to complete significant setup to perform basic system functions. Make initial setup decisions and perform setup with the most likely options. If you plan to use multiple organizations at any level, such as operating unit or inventory organization, setup two or three at each level. Pick a representative sample product to test first. In later phases, add other types of products. Start with minimal exception processing. Limit the variations you test in the first phases. You need to understand the normal everyday transactions before testing the impact of infrequent exceptions. However, be sure to test all exceptions in later testing phases. For each processing step in your test, select at least one inquiry and one report to validate the step, to verify system processing in Oracle Applications. In later phases, test all inquiries and reports you will use.

## Sample Company Profile

This paper includes one full sample business process for a discrete manufacturing company that builds and procures to order and uses standard costing. This process would be a good first business process test during an implementation. The business process includes **typical** process steps and lists some variations. You may need to test several processes and variations due to differences between your business and that of our sample company. Due to the large scope of this paper, we provide only high level descriptions of processing steps, who would typically

perform the step in the system, and major setup considerations, rather than full details of each.

The sample company is implementing the following Oracle Applications modules:

Core Financials:

General Ledger (GL), Accounts Payable (AP), Accounts Receivable (AR)

Core Manufacturing:

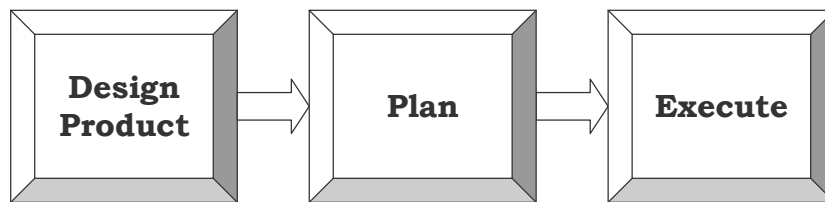
Order Entry (OE), Inventory (INV), Purchasing (PO), Cost Management (CST), Engineering (ENG), Bills of Materials (BOM), Work in Process (WIP), Material Requirements Planning and Master Production Scheduling (MRP/MPS).

Our sample company does not use the following modules:

Fixed Assets, Projects, Human Resources, Sales and Marketing, Sales Compensation, Service

In addition, our company does not use foreign currency, encumbrance, or funds control.

## Generic Business Process



The generic manufacturing business process for our sample company includes three major phases: Product Design, Planning, and Execution. We will describe each phase and break it down into its functional components. For each of the business functions, we will describe the standard business process for our sample company, including major application setup considerations and basic accounting entries. In addition, we will discuss common process variations your specific company may have. These variations may require procedural or setup changes from our sample company.

See Exhibit 1 for a complete chart of all processing steps in this paper and Exhibit 2 for a summary of accounting transactions.

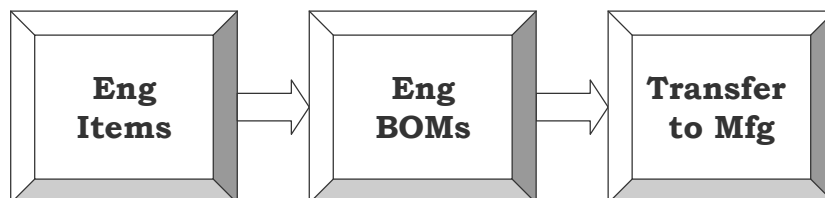
## A Product Design

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The first phase of our generic business process is to design the items, BOM's, and processes that support the manufacturing of a product.

### A1 Engineering Product Design

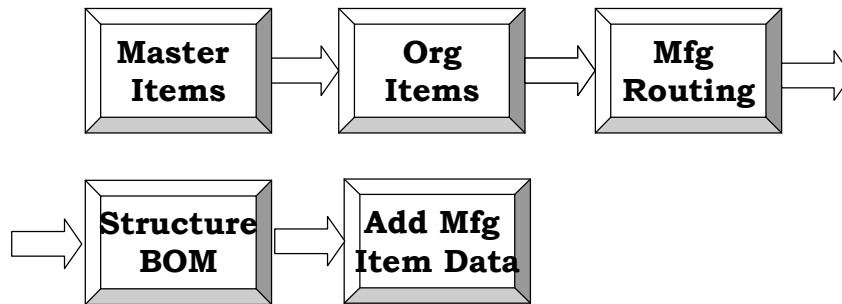
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Engineering designs the product, from the finished goods item down to the purchased components. They assign item numbers and specific item attributes such as item description, status and make/buy code. They establish multi-level engineering bills of material with quantity per assembly and effectivity dates. Management approves the new product structures off-line. Engineering transfers the engineering items and structure to the BOM module for full production use.

## A2 Manufacturing Product Design

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Manufacturing Engineering determines the process to build the product. They setup the operational routings that specify each manufacturing step along with machine and labor resources required to produce the specific product. They review the BOM's from Engineering and check for compatibility with the manufacturing process. They add manufacturing data to the item master such as leadtimes, planner codes, and planning order modifiers.

### Design Process Variations

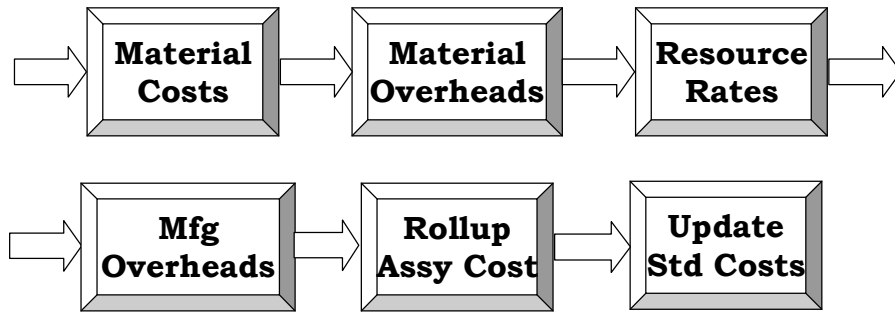
Instead of directly entering bills of materials, you may use engineering change orders to process new product additions or changes to existing products. Your company may use alternate routings or bills of materials to track alternate ways to process or define products. You may define common routings or bills of materials in which the identical operational process or product definition is common between assemblies or organizations. You may define phantom BOM's when defining product structures. You may choose not to use operational routings if there is insufficient business justification for creating and maintaining them.

### Inventory/BOM/Engineering Setup

Major Inventory, BOM, and Engineering setup considerations include the following:

- Item templates can streamline the addition and maintenance of items. Usually an item type is associated with each template to track the template's usage.
- Many standard Inventory reports sort criteria and special update functions include the item category code. You can use category sets to categorize the same item in several different ways.
- Each operation in a process routing requires a department code that can be used for reporting such as capacity analysis and work in process dispatching.
- Each operation step can optionally have one or more resource codes representing labor, machine or cost.
- Inventory balances must reside in one or more subinventory codes. Subinventories can represent physical or logical inventory locations such as raw material, WIP or finished goods stockrooms, or material review board.
- Within each subinventory you can use stock locators to represent a physical or logical location such as a rack, row, or bin location within a stockroom.

## A3 Standard Cost Development



Cost Accounting is responsible for developing new product standard costs as well as periodically reviewing and updating existing product standard costs. Purchasing determines material cost for purchase items based on historical purchase price history. Cost Accounting determines material overheads such as in-bound freight, usually a rate on the total material standard cost or a flat cost per unit. Cost Accounting determines resource rates, usually expressed as a standard labor rate per hour. Industrial engineers conduct time studies and update standard hours for the operation resources for the product. Cost Accounting determines the types of manufacturing overhead codes such as fixed and variable. The overhead costs are usually expressed as a flat cost per unit, percentage of resource hours, or percentage of value. After responsible users determine the cost elements (material, material overhead, resource (labor), manufacturing overhead, and outside processing) they update them into the pending cost type. Then Cost Accounting runs the assembly cost rollup to establish total assembly pending cost. Cost Accounting runs the standard cost update program to move the pending costs into the frozen standard cost.

### Cost Process Variations

Your sample product and cost process should simulate typical product costing setup at your company. Oracle supports the following cost elements: material, material overhead, resource (labor), manufacturing overhead, and outside processing. For each cost element, you can break cost into one or more sub-elements. Oracle supports average costing of Inventory and WIP value as of release 11.

### Cost Management Setup

Major Cost Management setup considerations include the following:

- At least one material cost element is required. You may want to consider additional material cost breakout.
- If your company tracks work in process resource costs such as labor or machines, you need to decide on the setup of these resource sub-elements. They are usually the same as the resource codes setup in the operational routing.
- If your product cost includes overheads, specify material and manufacturing overhead codes for each product along with the costing method such flat rate per item or percentage of total cost.
- The standard system comes with average, pending, and frozen cost types. You may need additional cost types for cost simulations and periodic updates.
- In support of the period end processing, cost account assignments are found throughout the Inventory, WIP, Purchasing, Order Entry, and BOM setups.

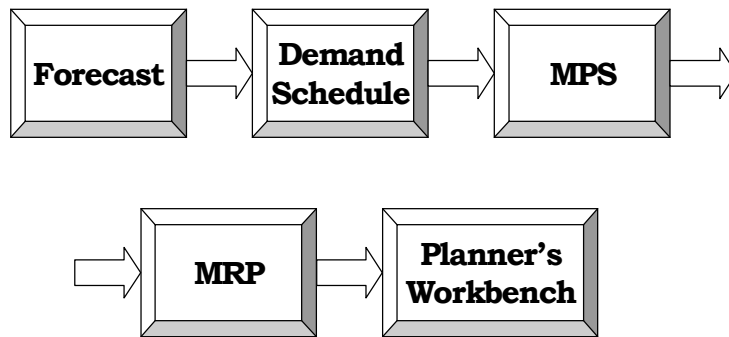
### Standard Cost Update Accounting

When you update standard costs, Oracle Inventory generates the following accounting entry to revalue inventory from the old to the new standard:

Account	Calculation	Dr	Cr
Dr (or Cr) Inventory value	100 parts x (100 new standard - 95 old standard)	500	
Cr (or Dr) Inventory adjustment	100 parts x (95 old standard - 100 new standard)		500

## B Planning

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After product design, the next phase in our generic business process is to plan expected production and material requirements. Sales establishes forecasted quantities and dates for our end item products. Our company schedules the series of planning programs to run weekly. The MDS load program copies the forecast into the master demand schedule (MDS). Master schedulers review the results and make changes if necessary. The master production schedule (MPS) creates new planned recommendations for the end product. Master production schedulers review and adjust the plan to consider capacity restraints and smooth production levels. The material requirement plan (MRP) recommends new planned orders for subassembly and component material. In addition MRP recommends changes to existing production and purchase orders. Planners review and revise the MRP recommendations via the planner's workbench. The planner's workbench creates discrete jobs and purchase requisitions based on planner actions.

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### Planning Process Variations

We forecast by end item product. You can also create forecasts for product families or other grouping of items. Demand may come from many sources such as customer sales orders, other manufacturing plants, distribution centers, or internal departments. You may want to include additional types of demand typically used by your company in the master demand schedule. If your company has capacity restraints, you may choose to generate infinite or detailed capacity plans. If your company stocks and ships inventory from many locations, you may choose to generate a distribution requirement plan (DRP). Supply Chain Planning can generate a plan for the entire supply chain.

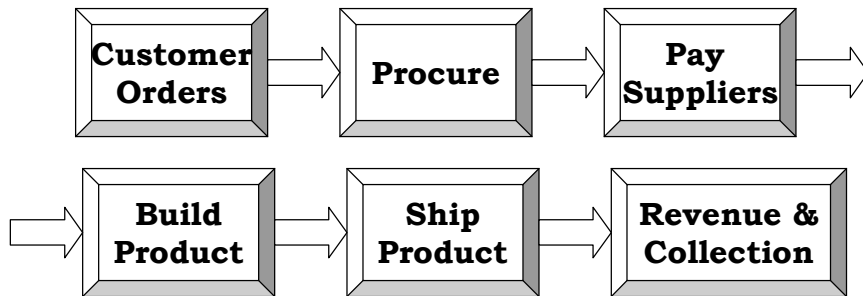
### Planning Setup

Major planning setup considerations include the following:

- At least one forecast, MDS, MPS, and MRP name is required. You may choose to setup additional names to support different data sources or to perform planning simulations.
- You need to setup planner codes to represent each person responsible for planning a subset of items.
- You can use planner's workbench folders to specify criteria such as planner code, make/buy code, and order cutoff date while reviewing and acting on planned recommendations.

## C Execution

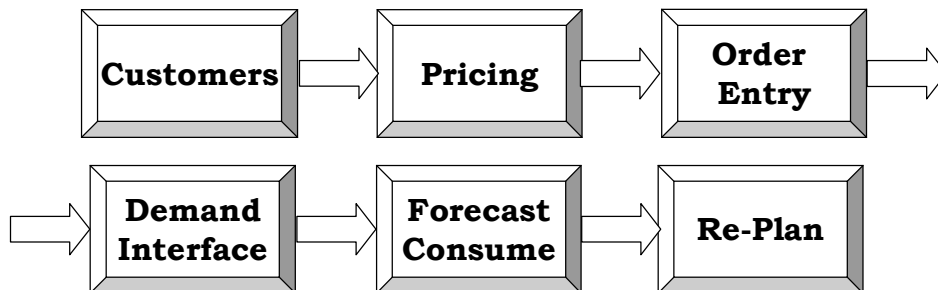
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After planning, the next and last phase in our generic business process is to execute the plan, from the placing of customer orders, through manufacturing, to shipping products to customers, and the supporting administrative functions. Many of these steps generate accounting entries.

### C1 Customer Orders

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The first step in order processing is to perform customer maintenance. Order Administration adds new customers for customer quotes and orders and accepts most defaults from system setup options. Order Administration negotiates global, distributor and customer specific pricing and discounts and sets up price lists. Order Administration enters sales orders and initiates on-line credit checking. If required they route orders for on-line approval. They print and forward sales order acknowledgments to customers when needed. A background process interfaces sales order demand to the planning system. This in turn causes sales forecast consumption. When the next planning cycle occurs, the production (MPS) and material (MRP) plans reflect new customer demand information.

### Order Entry Process Variations

Oracle Applications can support assemble to order (ATO) environments. This functionality allows the planning and stocking of purchase parts and subassemblies, but final assembly production is scheduled upon obtaining a customer order. A discrete work in process job is created for each sales order line and an inventory reservation is placed for the customer sales order upon completion of that job.

The order processing of bundles or kits is supported by the pick to order (PTO) process. This allows the ordering of one product to cause the shipment of one or more different products without creating a formal work in process job.

You may use order shipment schedules when a customer requests multiple shipments into the future. You may check availability of inventory as sales order lines are entered by using available to promise (ATP). You can place inventory reservations at any time after order entry up to shipping to allocate inventory on-hand to the specific customer order.

You change orders for cancellations, product changes, quantity increases or decreases, price changes, and shipment date re-schedules by customer request. You use return material authorizations (RMA's) to process customer returns

or shipments in error.

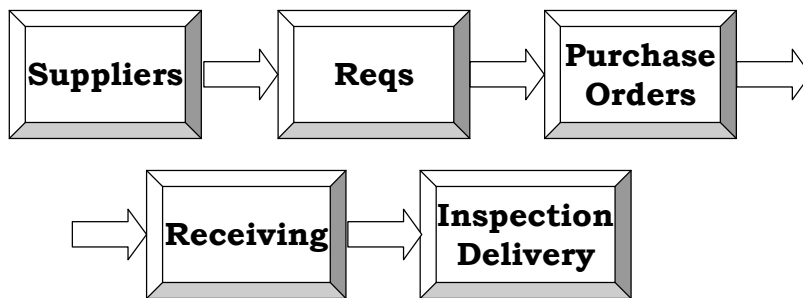
## Order Entry Setup

Major Order Entry setup considerations include the following:

- Data that defaults from the customer address level to the sales order includes payment terms, sales representative, price list, freight terms, and freight carriers.
- Order cycles specify the sales order life cycle. You must setup order cycles for regular orders, internal orders and RMA's. You may use additional order cycles to support orders that require different processing actions.
- At least one order type is required per order cycle. You may use additional ones to segregate and report on different types of sales.

## C2 Inventory Procurement

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The first step in inventory procurement is to perform supplier maintenance. Buyers add new approved suppliers as needed for purchase orders and accept most defaults from system setup options.

Typically requisitions for material purchases come from the MRP plan via the planner's workbench. The system automatically approves MRP requisitions which makes them available to be placed on purchase orders. Requestors enter other requisitions on-line for supplies needed and the system routes these requisitions for on-line approval. Buyers review the pool of approved requisitions, negotiate with suppliers, and subsequently autocreate purchase orders from the requisition pool. Buyers print and forward purchase order acknowledgments to suppliers when needed.

The Receiving department records the receipt of goods. If the item requires inspection, the Receiving department routes the goods through the Receiving/Inspection department. Inspectors document results of the inspection and route accepted goods to the stockroom for delivery, marking any rejected goods for return to vendor. Receivers route items that are designated direct delivery directly to the stockroom, bypassing Receiving/Inspection.

## Purchasing Process Variations

You will also have non-inventory (expense or fixed asset) purchases. Your company may place blanket orders with suppliers for frequent high volume purchases. For these you use blanket agreements and issue releases when buyers negotiate deliveries. Optionally you can use autosource rules to automatically create releases to blanket agreements. You may use paper requisitions, tracking and approving them off-line, instead of utilizing Oracle's on-line requisition functionality. If your business dictates the use of request for quotes (RFQ's) such as for government contractors, a buyer can enter and track RFQ's and subsequent supplier quotes as a prerequisite to confirming a purchase order with a specific supplier.

## Purchasing Setup

Major Purchasing setup considerations include the following:

- Data defaults from the supplier address level to the purchase order such as payment terms, freight terms, and freight carriers.

- You setup one and only one purchasing category set in which item category codes typically represent major commodities.
- Purchasing locations include billing and receiving locations.
- Lines types on requisitions and purchase orders represent types of goods or services. You can specify attributes such as quantity or amount based and whether receipt is required by line type.
- FlexBuilder generates the charge, invoice price variance, and accrual accounts on requisitions and purchase orders. You can customize rules to defaults parts of your account number from various data sources.

## Purchasing Receipt Accounting

For standard receipts into receiving for PO distributions with a destination type of Inventory, the Oracle Purchasing entry is:

Account	Calculation	Dr	Cr
Dr Receiving	1 part x 99 PO price	99	
Cr Inventory AP accrual	1 part x 99 PO price		99

The Oracle Inventory entry for delivery to stock, excluding any material burden or material burden absorption, is:

Account	Calculation	Dr	Cr
Dr Inventory value	1 part x 100 material standard	100	
Cr Receiving	1 part x 99 PO price		99
Cr (or Dr) Purchase price variance	1 part x (99 PO price - 100 material standard)		1

## C3 Pay Suppliers



The Accounts Payable department enters invoices for inventory purchases, matches them to purchase orders using PO Default, and runs AutoApproval on-line. They run matching hold reports periodically and work with buyers to resolve matching holds, such as invoice price differences or receipt holds. AutoApproval automatically runs twice a day to approve invoices for any changes to matching data, such as new receipts. AP runs checkruns twice a week to pay all invoices that are due, taking any discounts available.

## Accounts Payable Process Variations

You will also have non-inventory (expense or fixed asset) invoices. We included only manual invoice entry in our business model. You may use pay on receipt, invoice import, or recurring invoices in your company, usually determined by supplier or type of purchase. Many inventory purchases have freight or other charges, either on the same or separate invoice as goods. Invoices, generally non-inventory, may have sales tax or use tax. General business practice in the US is to prorate tax, freight, and other charges to expense lines on non-inventory invoices but to charge amounts to separate accounts for inventory purchases. The AP department or buyers may have sole or shared responsibility to monitor and resolve invoice matching holds.

Besides checkruns, you may pay invoices using individual QuickChecks, wires, manual payments, EDI, or may apply prepayments to cover part or all of the balance due. You may have several bank accounts or payment formats. You may use pay groups or priorities to select invoices for payment on appropriate payment batches. You may use Cash Management to reconcile your bank account, to record cleared date and amount on AP payments, and to account for any differences when payments clear the bank.

## Accounts Payable Setup

Major Accounts Payable setup considerations include the following:

- AP may add supplier information not setup by Purchasing, such as pay sites and 1099 information.
- Matching tolerances cause AutoApproval to place holds on invoices that have different quantities or amounts than purchase orders. Tolerances are percentages up to optional total quantities or amounts. Tolerance types include quantity ordered, quantity received and price.
- Payment formats specify currency and type of payment such as check or EDI. You assign payment formats to payment documents within each bank account.

## Accounts Payable Accounting

The basic Oracle Payables entry when AP matches an inventory invoice to a PO is:

Account	Calculation	Dr	Cr
Dr Inventory AP accrual	1 part x 99 PO price	99	
Cr Liability	1 part x 97 invoice price		97
Cr (or Dr) Invoice price variance	1 part x (97 invoice price - 99 PO price)		2

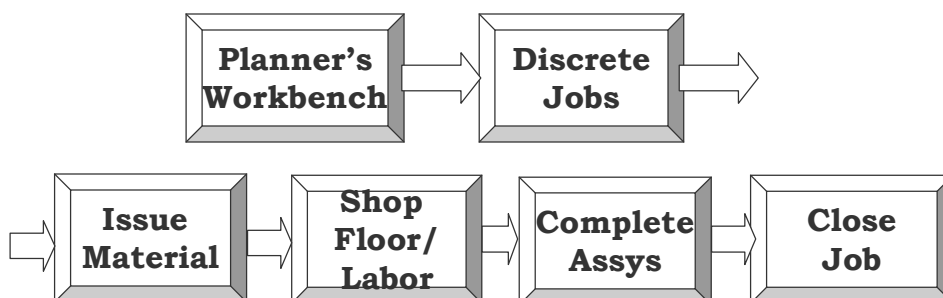
If the invoice is in a foreign currency, there may also be a Dr or Cr above to exchange rate variance (ERV). If the invoice has tax, freight, or other charges, there will be Dr distributions to appropriate accounts.

The basic entry for a payment, assuming a discount is taken, is:

Account	Calculation	Dr	Cr
Dr Liability	1 part x 97 invoice price	97	
Cr Cash	(1 part x 97 invoice price) - 3 discount		94
Cr Discount			3

If the invoice is in a foreign currency, there may also be a Dr or Cr above to gain/loss.

## C4 Build Product



The MPS/MRP planner's workbench loads discrete jobs for scheduled production. The Production Scheduling department manually creates discrete jobs for work such as building unplanned assemblies, repairing customer returns, and reworking rejected parts. The Stockroom prints discrete job material pick lists and picks material. The Stockroom issues material to the discrete jobs and material is moved to the shop floor. Production builds the product and moves the assembly in process from one operation to the next. Operation move transactions cause the earning of standard labor and overhead costs. Production reports WIP completions which moves the assembly into a stocking subinventory. Cost Accounting reviews completed discrete job material usage and routing standard variances, and subsequently closes the jobs.

## WIP Process Variations

For some types of products you may use repetitive or flow manufacturing instead or in addition to discrete manufacturing. For other non-standard production such as product repair, teardown or engineering prototypes you can use non-standard jobs. Our company used a material push WIP supply type. You may chose to backflush material using assembly or operational pull WIP supply types. The Production department can scrap assemblies on the shop floor which charges the incremental assembly cost to a scrap account. If a product is partially built at outside suppliers you can track the items and cost through outside processing jobs and purchase orders.

## WIP Setup

Major WIP setup considerations include the following:

- At least one WIP accounting class is required for each type of job, standard discrete, asset non-standard, and expense non-standard. You may be use additional ones to segregate value and report on different types of WIP.

## WIP Accounting

When you issue material to a job, WIP records the following entry:

<b>Account</b>	<b>Calculation</b>	<b>Dr</b>	<b>Cr</b>
Dr WIP valuation	1 part x 100 material standard	100	
Cr Inventory valuation	1 part x 100 material standard		100

As you perform shop floor moves, WIP records the following entry for earned labor and overhead:

<b>Account</b>	<b>Calculation</b>	<b>Dr</b>	<b>Cr</b>
Dr WIP valuation	1 part x 20 earned resource and overhead standard	20	
Cr Resource/overhead absorption	1 part x 20 earned resource and overhead standard		20

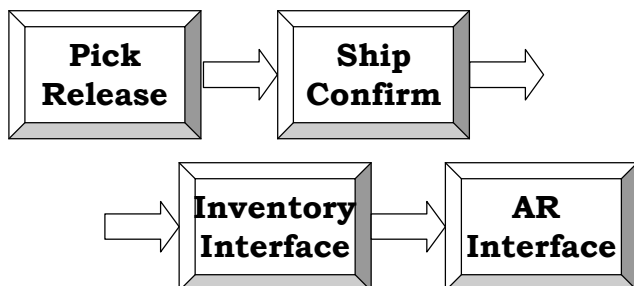
As you complete WIP jobs, the following entry adds the total standard cost of completed assemblies to inventory:

<b>Account</b>	<b>Calculation</b>	<b>Dr</b>	<b>Cr</b>
Dr Inventory valuation	1 part x 130 assembly standard	130	
Cr WIP valuation	1 part x 130 assembly standard		130

When you close discrete jobs, you record variances from standard as follows:

<b>Account</b>	<b>Calculation</b>	<b>Dr</b>	<b>Cr</b>
Dr (or Cr) WIP valuation	1 part x (130 assembly std - 120 material+earned)	10	
Cr (or Dr) WIP variance	1 part x (120 material+earned - 130 assembly std)		10

## C5 Ship Product



Shipping runs the pick release process which prints pick slips for sales orders scheduled to ship. The Finished Goods Stockroom picks and stages product for shipment. The Shipping department confirms shipments for each

sales order and enters information such as shipment and backorder quantities, freight charges, subinventories, stock locators, serial numbers and lot numbers. The ship confirmation process prints a packing slip after the pick slip is closed. A background process interfaces inventory shipments to the inventory module to relieve inventory balances and create cost of sales. Another background process interfaces shipments to the AR module for invoice creation and revenue recognition.

## Shipping Process Variations

Your company may want to check customer credit upon pick release to prevent shipments to customers at credit risk. Inventory may be reserved upon pick release, thus preventing inventory from going negative in the system or pick slips being printed where inventory does not exist. You may use different inventory control levels such as stock locators, serial control or lot control. In these cases, the shipment quantities must include not only the subinventory from which the inventory is shipped, but also the additional levels of control.

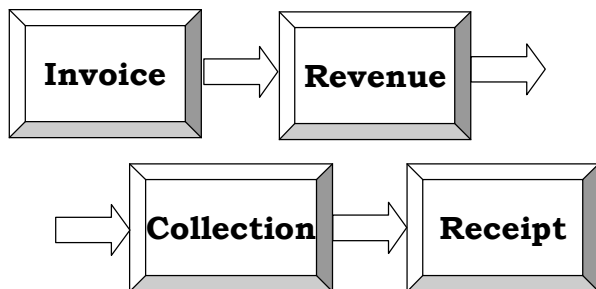
## Shipping Accounting

When you ship confirm and run the interface to Inventory, Inventory generates the following entry:

Account	Calculation	Dr	Cr
Dr Cost of sales	1 part x 130 assembly standard	130	
Cr Inventory valuation	1 part x 130 assembly standard		130

## C6 Revenue and Collection

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The AR department runs the AutoInvoice process to generate invoices for goods shipped to customers. They then print and send invoices and credit memos to customers. When AR runs the AR to GL transfer, Revenue Recognition automatically runs. Customers mail payments to a lockbox and the AR department receives batches and backup documentation from the bank daily. AR enter receipts and applies them to invoices. The Credit and Collections department sets credit limits, monitors aged receivable balances, contacts customers about overdue amounts, and authorizes adjustments as needed.

## Accounts Receivable Variations

You may import invoices from other sources besides Order Entry, may enter manual invoices, or may use recurring invoices in your company, usually determined by customer or type of sale. Many sales invoices include freight, sales tax, or other charges. You may use a tax vendor such as Vertex to supply tax rates by location. In some businesses customers make commitments, either a prepayment/deposit or an agreement/guarantee to purchase a certain amount of goods. Invoices then can reference and reduce such commitments. Our sample company recognizes revenue upon invoicing. You may use accounting or invoicing rules, such as recognizing deferred revenue over a period of a service.

Besides manual receipt entry and application, you may use AutoLockbox to import a file of receipts from your bank, use AutoReceipts to charge a customer's bank account for invoices due, or may apply credit memos to cover all or part of the balance due on an invoice. You may use Cash Management to reconcile deposits in your bank account.

## Accounts Receivable Setup

Major Accounts Receivable setup considerations include the following:

- AR may add customer information not setup by Order Entry staff, such as bill to sites and specific customer profile class and overrides.
- You assign a customer to a customer profile class based on their collection history. You may assign shorter terms, lower credit limits, statements, or dunning letters to customers in higher risk profile classes.
- You need to define AutoAccounting rules to derive all pieces of your account number for accounts including revenue, accounts receivable, freight, and tax.
- AR transaction types are tied to order types. You may use transaction types to designate different types of sales or credits, product lines, or organizational units.
- At least one invoice batch source is required for invoices interfaced from Order Entry. You may setup additional sources for invoices from other systems.
- You need to choose a sales tax location structure to assign customer addresses to tax rates. If you charge sales tax, you may setup or load tax rates by location.
- You need to setup bank accounts and receipt batch sources for each bank account in which you receive cash.

## Accounts Receivable Accounting

Sales invoicing generates the following entry:

<b>Account</b>	<b>Calculation</b>	<b>Dr</b>	<b>Cr</b>
Dr Receivables	1 part x 180 invoice price	180	
Cr Revenue	1 part x 180 invoice price		180

If the invoice has freight or sales tax, there will also be Cr's above to those accounts.

Applying receipts to invoices produces the following entry:

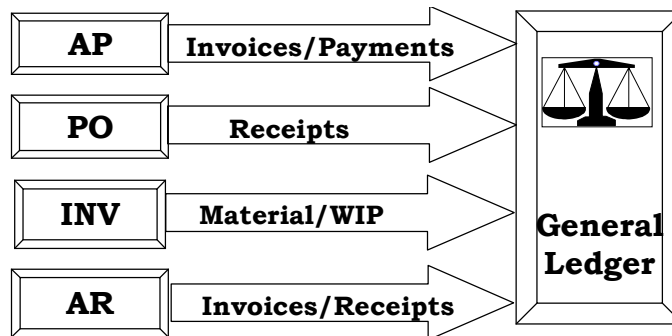
<b>Account</b>	<b>Calculation</b>	<b>Dr</b>	<b>Cr</b>
Dr Cash	(1 part x 180 invoice price) - 5 discount	175	
Dr Discount		5	
Cr Receivables	1 part x 180 invoice price		180

All receipts also Dr and Cr unapplied cash, which nets to zero if the receipt is fully applied. If the invoice is in a foreign currency, there may also be a Dr or Cr above to gain/loss.

## Period End Close

For the business process in this paper for our sample company AP, PO, Inventory, and AR generate accounting entries. Our company posts from subledgers to GL weekly. As part of each subledger close, the responsible users post to GL, post their journals in GL, run subledger reports, and reconcile to GL balances. They then close the period for their subledger and open the next period.

The order of the close is significant in some cases due to relationships between modules. For example, we complete all PO receipts and deliveries and close the PO module before final posting from Inventory to GL. The order of our basic close is shown and described below.



AP users run the AP/GL transfer process by operating unit, which initiates Journal Import for purchase invoice and payment journals. AP also runs the PO module Receipt Accrual Period End process to accrue uninvoiced expense receipts and runs Journal Import to import journals into GL. AP users then post all their journals in GL and reverse the prior month accrual. AP users reconcile the AP module and balance to GL with reports including the AP Trial Balance, Posted Invoice Register, Expense Distribution Detail, Posted Payment Register, Payment Register, Void Register, and Uninvoiced Receipts Report.

Cost Accounting users are responsible for generating journals for both the Purchasing and Inventory modules. They ensure no transactions remain in the interface tables before starting the period end process. In Purchasing, recording an inventory receipt generates a journal entry line for GL. Cost Accounting runs Journal Import weekly to import receipt entries into GL and posts journals in GL. Cost Accounting transfers from Inventory to GL weekly by inventory organization, which generates WIP and Inventory journals. They run Journal Import to import journals into GL and post them in GL. Cost Accounting users reconcile the Purchasing and Inventory modules and balance to GL with reports including the Accrual Reconciliation Report, Receiving Account Distribution Report, Receiving Valuation Reports, Inventory Value Reports, Material Account Distribution Summary and Detail Reports, Period Close Summary, Transaction Balance Historical Summary, WIP Value Reports, and WIP Account Distribution Summary Report.

AR users run the AR/GL transfer process by operating unit, which initiates Journal Import for sales invoice, credit memo, adjustment, receipt, and other journals. AR users then post their journals in GL. AR users reconcile the AR module and balance to GL with reports including the Aged Trial Balance, Transaction Register, Sales Journal, Adjustment Register, Applied and Unapplied Receipts Registers, Deposited Cash, Receipt Register, Reversed Receipts, and Journal Entries Report.

Order Entry has no period end close processes, however, we ensure that shipments for the period are complete and interfaces run to Inventory and AR before closing those modules.

GL users complete the close with additional journals, allocations, reconciliations, and reports.

In some cases the complete effect of a transaction is recorded by more than one module and reconciliation cannot be completed until all modules close. For example, full accounting for inventory receipts is generated by three modules and inventory shipments by two modules as shown in Exhibit 3.

## Conclusions

Plan for your project team to conduct a hands-on test in Oracle Applications to model your business process early in your implementation. This will help your project team to learn setup and processing options and the accounting entries from transactions. Use the process in this paper as a guideline to develop your baseline test plan. As your implementation progresses, refine your setup and processing decisions as needed to meet business requirements. In later phases of testing, revise your initial business process test plans for setup and processing changes and add scenarios such as exceptions. Ensure users understand how their own process fits in to the entire enterprise business cycle.

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## About the Presenters

Margaret Coleman is the owner of Margaret Coleman Consulting, and has been an independent consultant since 1985. Maggie has specialized in implementing manufacturing and distribution systems for over 20 years. She participated in the original design and testing of the Oracle Manufacturing modules, and has been consulting on the Oracle Applications since 1988. Prior to consulting, Maggie worked in various information systems positions from a programmer analyst to a supervisor of systems analysts. She has received her Certification in Production and Inventory Management (CPIM) from the American Production and Inventory Control Society.

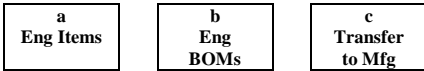
Melanie Bock is a consultant exclusively for Oracle Financials implementations. She began working with the Financials in 1987 while a Consulting Manager with Oracle Corporation. Since 1990 she has been an independent consultant and has provided consulting assistance to over 120 Financials clients. Melanie specializes in GL, AP, PO, FA, and AR, primarily from the user perspective. She is a Certified Public Accountant and has spent most of her career in systems. Melanie has also been an auditor and consultant with Arthur Andersen & Co. and a MIS Manager.

# Sample Business Process Flow

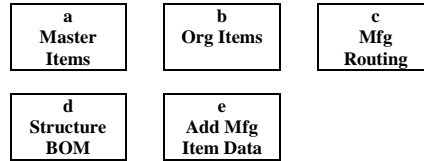
# Exhibit 1

## A Product Design

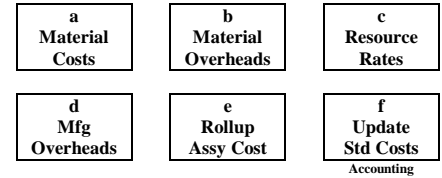
### A1 Engineering Product Design



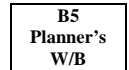
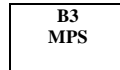
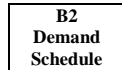
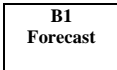
### A2 Manufacturing Product Design



### A3 Standard Cost Development

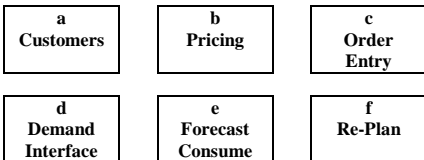


## B Planning

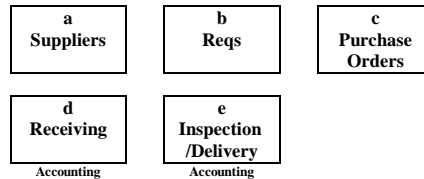


## C Execution

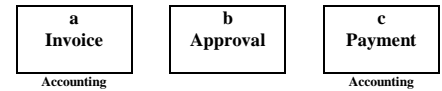
### C1 Customer Orders



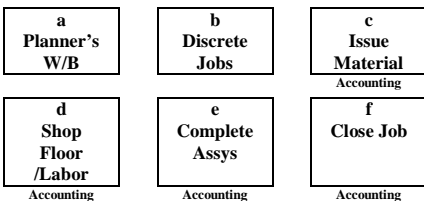
### C2 Inventory Procurement



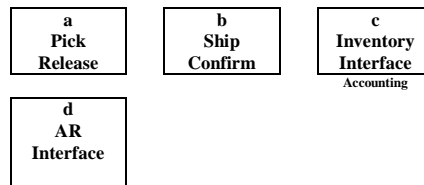
### C3 Pay Suppliers



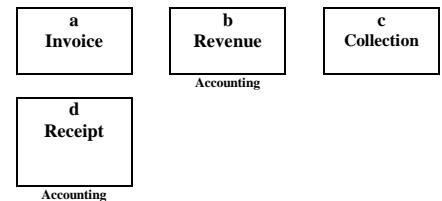
### C4 Build Product



### C5 Ship Product



### C6 Revenue and Collection



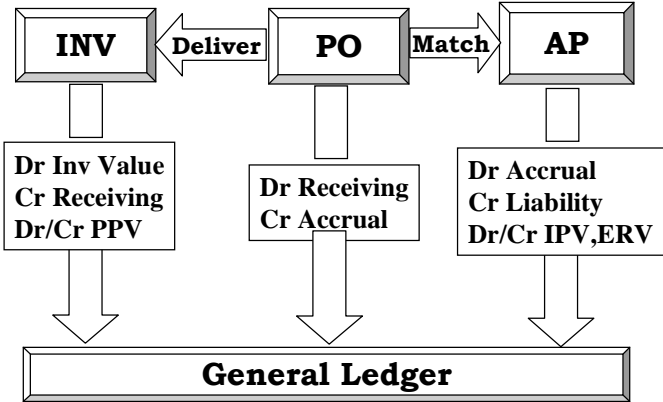
## Summary of Accounting Transactions

Exhibit 2

Transaction / Account	Calculation	Dr	Cr
<b>A3f Standard Cost Update</b>			
Dr (or Cr) Inventory value	100 parts x (100 new standard - 95 old standard)	500	
Cr (or Dr) Inventory adjustment	100 parts x (95 old standard - 100 new standard)		500
<b>C2d PO Receiving</b>			
Dr Receiving	1 part x 99 PO price	99	
Cr Inventory AP accrual	1 part x 99 PO price		99
<b>C2e Delivery to Stock</b>			
Dr Inventory value	1 part x 100 material standard	100	
Cr Receiving	1 part x 99 PO price		99
Cr (or Dr) Purchase price variance	1 part x (99 PO price - 100 material standard)		1
<b>C3a AP Invoice</b>			
Dr Inventory AP accrual	1 part x 99 PO price	99	
Cr Liability	1 part x 97 invoice price		97
Cr (or Dr) Invoice price variance	1 part x (97 invoice price - 99 PO price)		2
<b>C3c AP Payment</b>			
Dr Liability	1 part x 97 invoice price	97	
Cr Cash	(1 part x 97 invoice price) - 3 discount		94
Cr Discount			3
<b>C4c Issue Material</b>			
Dr WIP valuation	1 part x 100 material standard	100	
Cr Inventory valuation	1 part x 100 material standard		100
<b>C4d Earn Labor and Overhead</b>			
Dr WIP valuation	1 part x 20 earned resource/overhead standard	20	
Cr Resource/overhead absorption	1 part x 20 earned resource/overhead standard		20
<b>C4e Complete Assemblies</b>			
Dr Inventory valuation	1 part x 130 assembly standard	130	
Cr WIP valuation	1 part x 130 assembly standard		130
<b>C4f Close Discrete Job</b>			
Dr (or Cr) WIP valuation	1 part x (130 assembly std - 120 material+earned)	10	
Cr (or Dr) WIP variance	1 part x (120 material+earned - 130 assembly std)		10
<b>C5c Shipping Inventory Interface</b>			
Dr Cost of sales	1 part x 130 assembly standard	130	
Cr Inventory valuation	1 part x 130 assembly standard		130
<b>C6b Revenue</b>			
Dr Receivables	1 part x 180 invoice price	180	
Cr Revenue	1 part x 180 invoice price		180
<b>C6d AR Receipt</b>			
Dr Cash	(1 part x 180 invoice price) - 5 discount	175	
Dr Discount		5	
Cr Receivables	1 part x 180 invoice price		180

All the above are basic transactions in the functional currency. There are many variations possible, some of which are explained in the paper.

# Inventory Receipts



# Inventory Shipments

