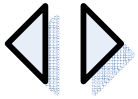
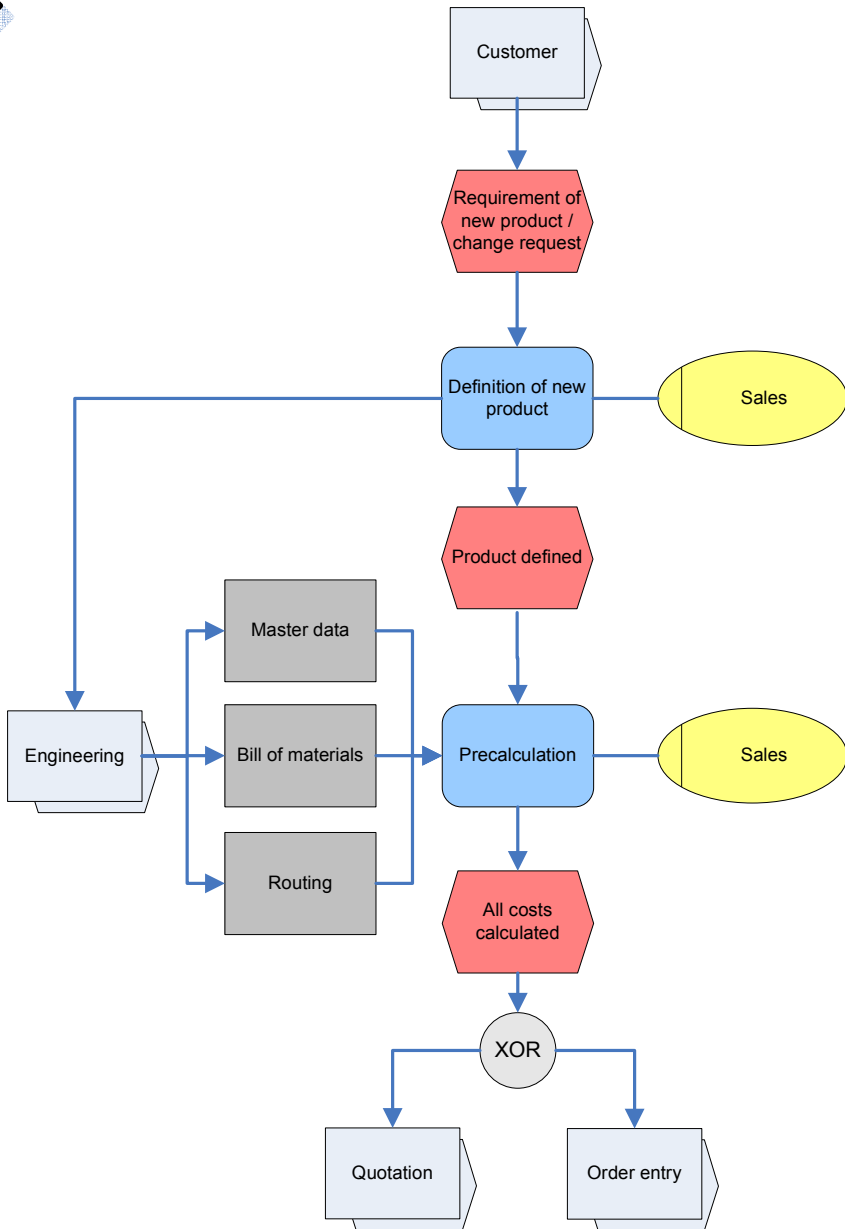


Precalculation

Organisation Function Event Information Other process



tour text

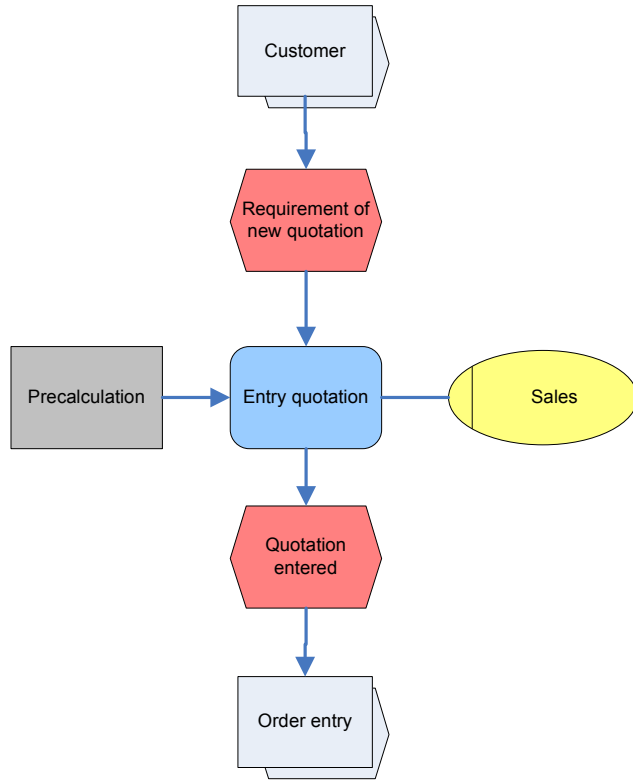


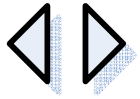
Quotation

● Organisation □ Function ⬠ Event □ Information □ Other process

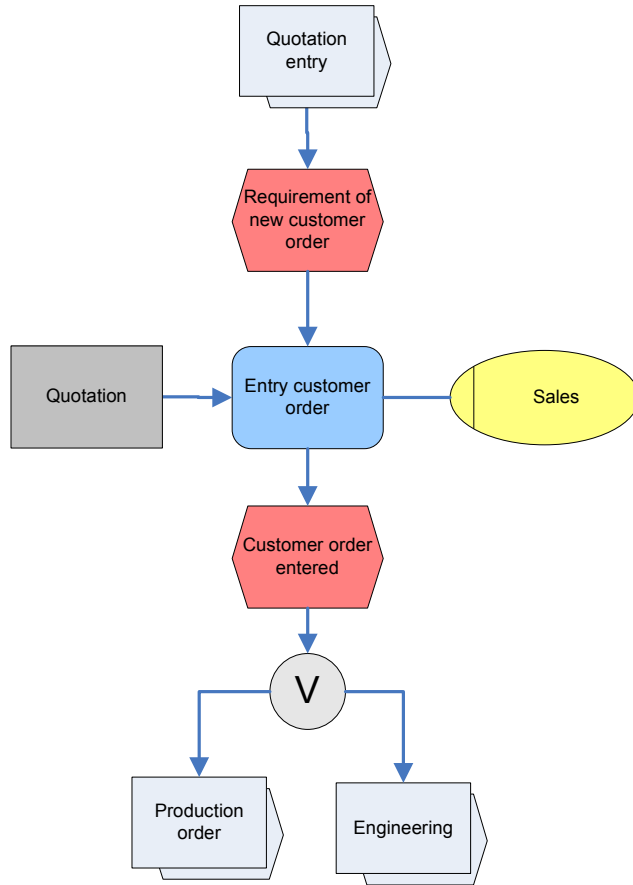


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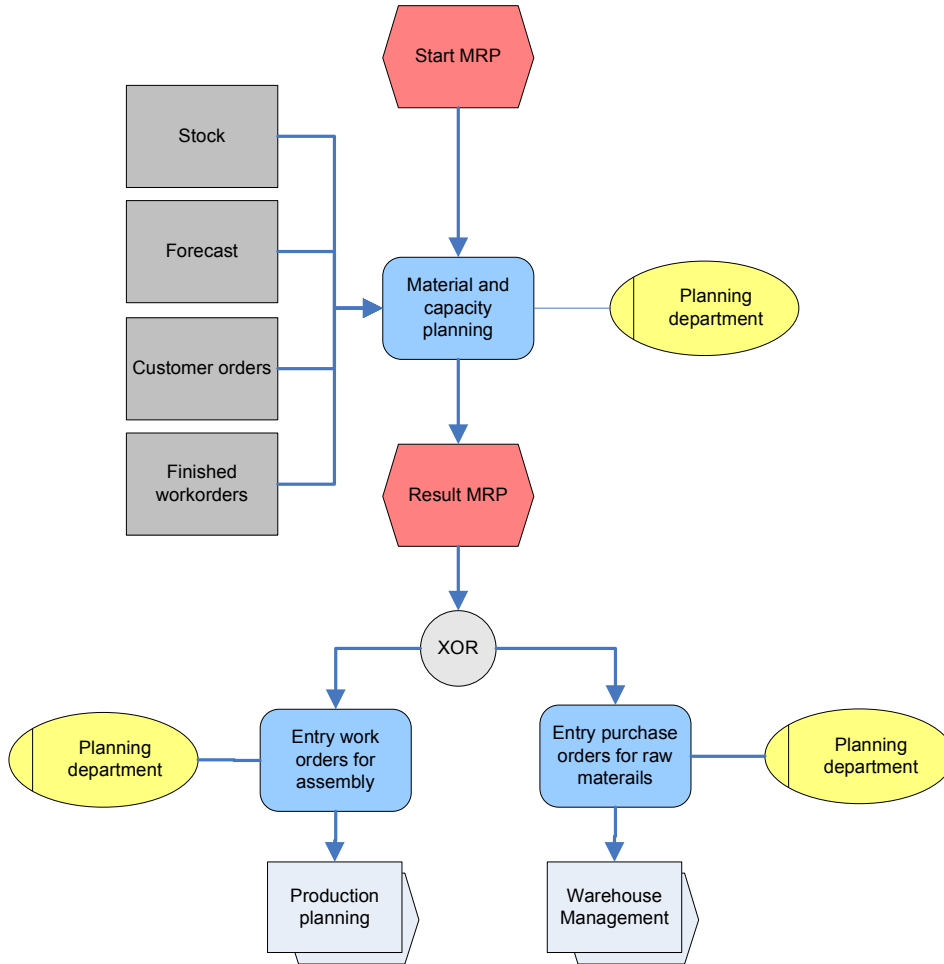


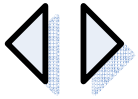
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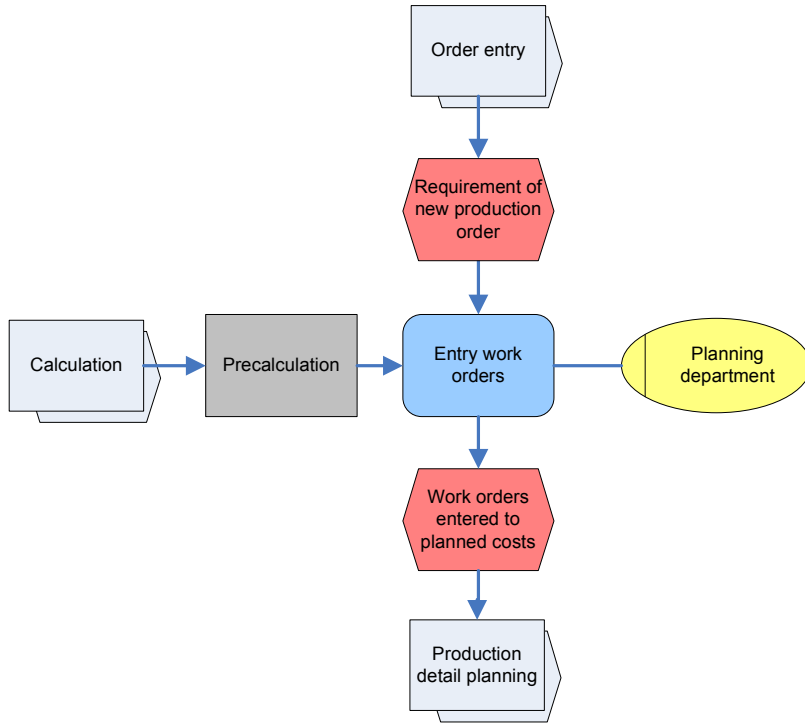


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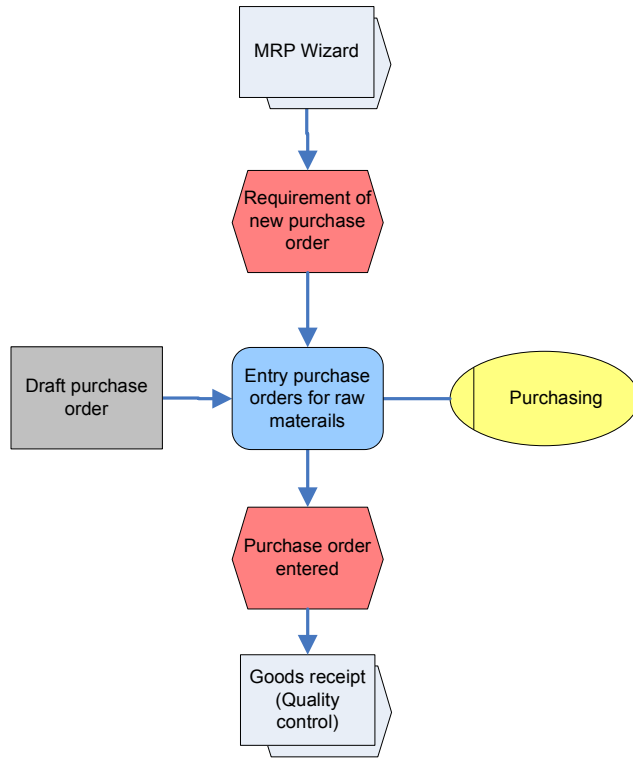


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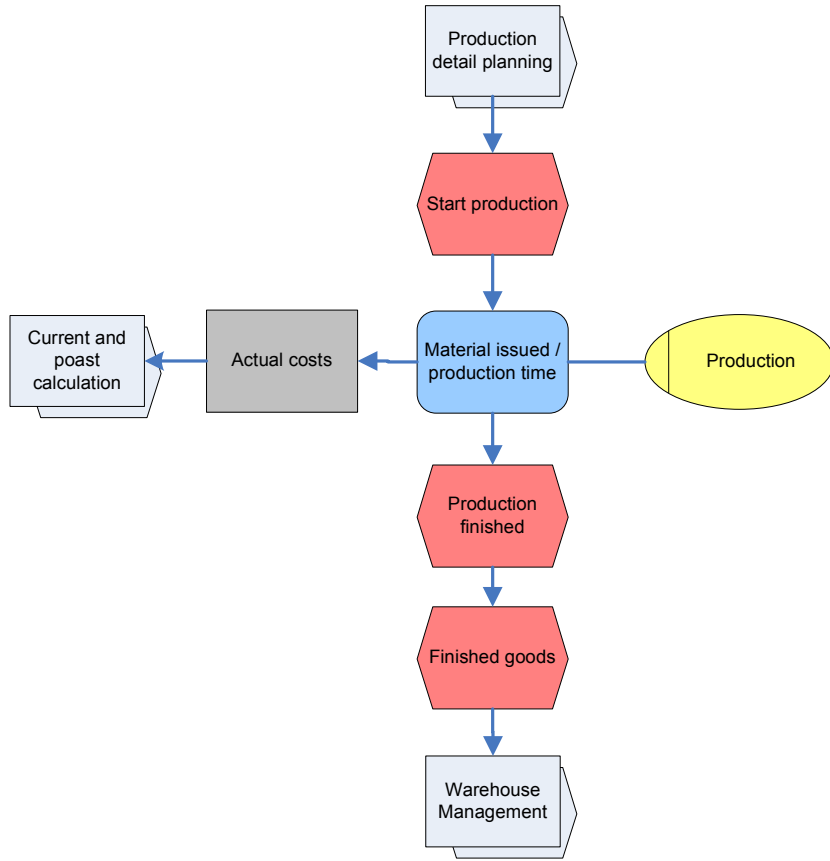


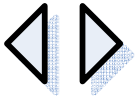
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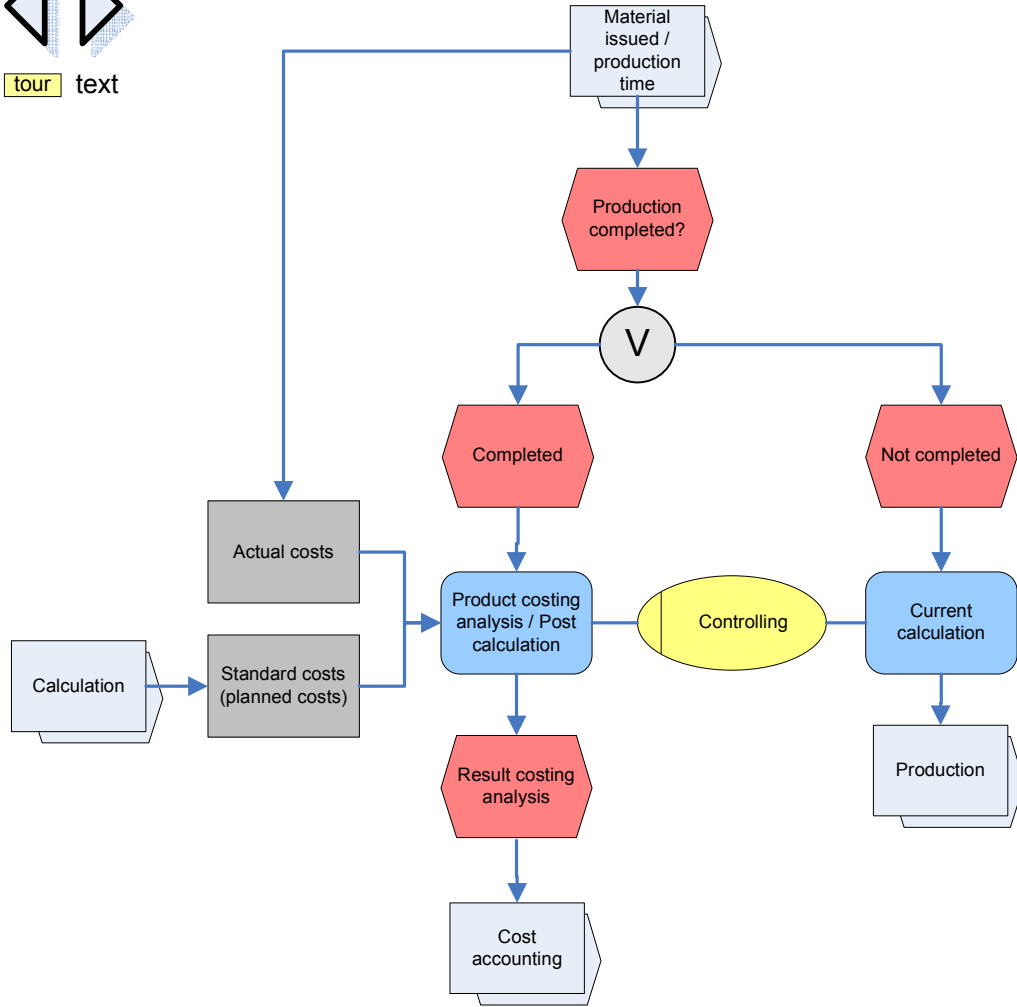


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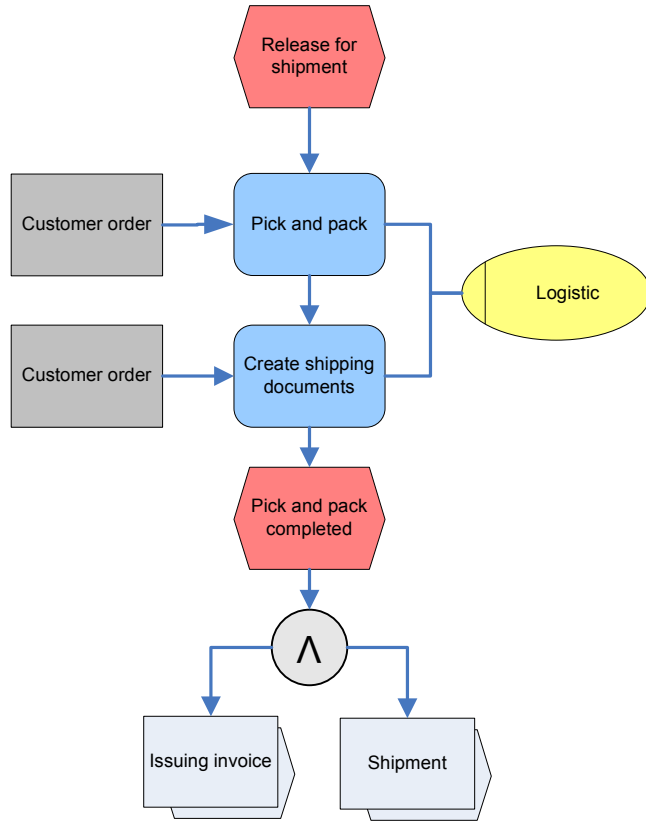


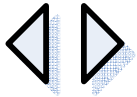
Pick and pack

Organisation Function Event Information Other process

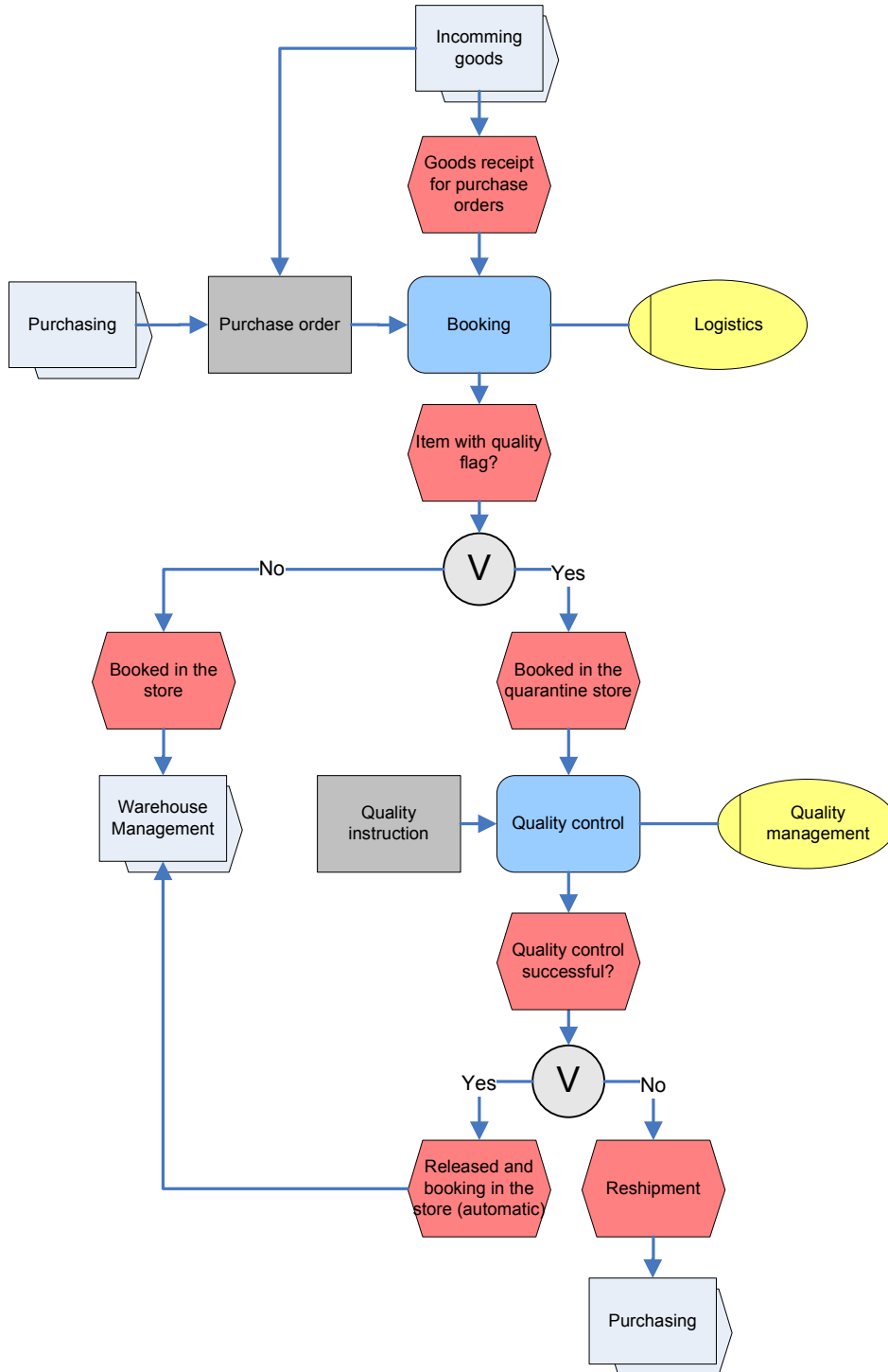


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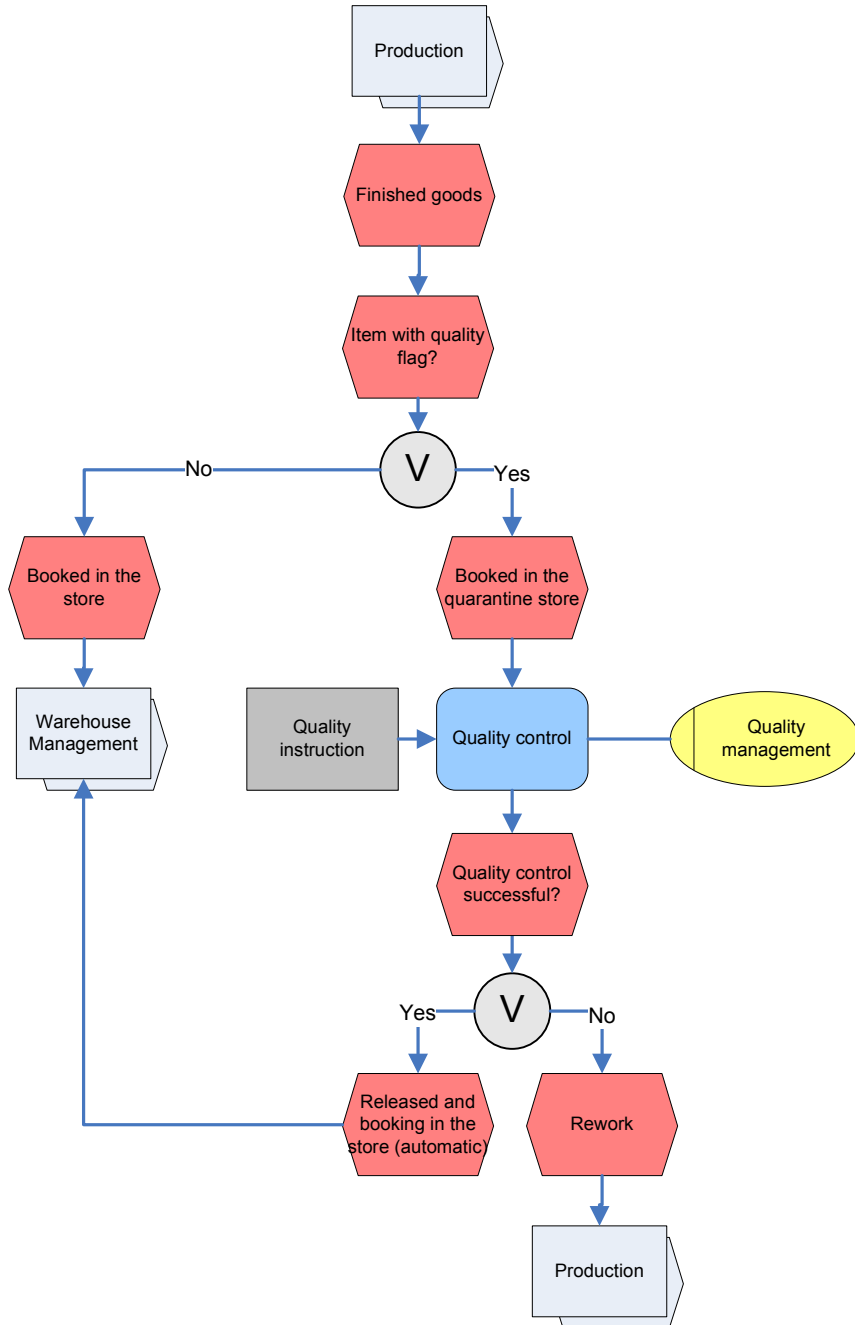


tour text





tour text





The Pre-Calculation function allows users to perform “Engineering Adjustments” to any chosen item. This adjustment will remain with the Quote and/or Order and will further be used to issue unique Work Orders once issues.

1. In the pre-calculation sub-process form the user can see the default settings and related cost information from the BOM and Route related to the chosen item (finished good or sub-assembly).
2. From this calculation screen adjustments to a specific item BOM and Route can be made through right mouse clicks to add/remove/edit information in the default calculation rollup.
3. The adjusted item is then saved as a numbered Pre-Calculation template in the Pre-Calculation module, and can be used for Quotations and Sales (NOTE: if adjusted in the Quotation or Sales documents, the adjusted information will be automatically attached).
4. All cost rollups are re-calculated based on the changes made and reflected in the pre-calculation template
5. From this position – the new pre-calculation can be



This process flow describes the Engineer to Order Sub-Process supported within the Quotation process within SAP B1. This will allow, at time of Quotation, a user to customize the quotation to the customer's specific engineering changes. This will also control the versioning of all unique changes so that they can be used again as required and are available as reference.

1. The customer requests a sales quotation
2. In sap b1 the sales quotation is raised and an item selected
– then saved
3. The pre-calculation screen is initiated by clicking the “calculation” button
4. The pre-calculation process is performed (see details in this presentation)
5. Once a pre-calculation is determined and saved, it is applied to the specific quotation
6. Costs to produce are updated



This process flow describes the Engineer to Order Sub-Process supported within the Customer (Sales Order) process within SAP B1. This will allow, at time of Customer Order, a user to customize the customize or select an available customization based on the customer's specific engineering changes. This will also control the versioning of all unique changes so that they can be used again as required and are available as reference.

1. The customer requests a sales order
2. In sap b1 the sales quotation can be chosen as the base document if available or a unique sales order can be entered.
3. The pre-calculation screen is initiated by clicking the "calculation" button if a previous pre-calculation is not determined during quotation.
4. If required, the pre-calculation process is performed (see details in this presentation)
5. Once a pre-calculation is determined and saved, it is applied to the specific sales order
6. Costs to produce are updated



This process flow describes the Engineer to Order Sub-Process supported within a traditional Engineer to Order organization. This will describe the common steps performed in an engineering department to support engineer to order. Either at the time of Quotation or Sales Order, a user can allow for customization of the item to be produced to the customer's specific engineering changes. This is usually performed by members of the engineering department within an organization.

1. The customer requests an engineering change
2. In sap b1 the sales quotation or sales order is raised and an item selected – then saved
3. The Engineering department is notified using internal workflow within SAP Business One that an engineering change is required (usually via an alert or approval based on a UDF flag).
4. The assigned engineer will open the quote or order document and click the calculation button.
5. The pre-calculation process is performed (see details in this presentation)
 - a. Items from inventory can be added/removed/edited
 - b. Route operations can be added/removed/edited
 - c. Items currently not in inventory can be added/removed/edited
 - d. Version control is maintained automatically upon save
6. Once a pre-calculation is determined and saved, it is applied to the specific quotation or order document
 - a. Production costs are updated based on the unique calculation template
7. Engineering will then approve the associated document (quotation or order) and notification will be sent via normal SAP Business One workflow.
8. MRP will be run for normal production management
 - a. Work Orders generated from MRP will utilize the engineered calculation template attached to the specific sales order
9. NOTE: this process can also be used to update existing templates



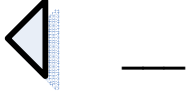
This process flow describes the Engineer to Order Sub-Process supported within the beas MRP calculation. Configuration settings of MRP to utilize engineering changes at the order level must be made to enable this function. This configuration setting allows the standard MRP functions in beas to take into account all unique engineering changes made and applied to any sales orders in the system. The MRP will calculate the demand based on the multi-level BOM requirements applied against the route cycle times. MRP can utilize demand from available stock, forecasts, customer orders, and finished work orders.

1. Production Planner will start the MRP Process
 - a. Select from the available MRP templates
 - i. Highlight the MRP template
 - b. Create a new MRP template
 - i. Choose parameters
 - ii. Choose demand sources
 - iii. Choose stock locations to be nettable
2. Calculate MRP
 - a. Click the calculate button on the MRP main screen
 - b. System will run calculation sequence
 - c. Calculation time/date will update automatically
 - d. NOTE: calculation can be set to run automatically
3. View Results
 - a. Once calculated – the resulting shortages are viewed by clicking the View button
 - b. The results screen auto-filters to show all shortages in materials based on the calculation template.
4. Create PO/WO documents
 - a. From the results screen the use can identify all items to be produced or purchased – and see the associated demand leading to the negative available quantities.
 - b. Filling the ordered quantity fields with a number will allow creation of PO or WO documents.
 - i. Purchased items are shown with a bin icon
 1. Requires selection of supplier if no default is assigned
 2. If applicable, the price will fill automatically
 - ii. Produced items are shown with a folder icon.
 - c. Purchase Orders and/or Work Orders are generated by clicking the appropriate button at the bottom of the screen.
 - i. System will generate multiple PO documents (one per vendor selected) and multiple WO documents (one per item selected)



This process flow describes the Engineer to Order Sub-Process supported within the Work Order (Production Order) within beas. This process allows entry of a Work Order in production – along with all multi-level BOM and Route information carried to the Work Order.

1. A Sales Order (or other “demand” such as forecast) is entered into the system
2. The order generates a requirement for a new Work Order
3. If an engineering change has been generated – it is recorded through the pre-calculation process as described earlier.
4. The Work Order is produced (either manually via the Sales Order / Work Order screen or via the MRP results screen described earlier)
5. Work Orders are entered into the Production Plan – for the shop floor.
6. Work Orders are now subject to Ruff Cut Capacity Planning functions within beas.





In the beas Capacity Planning and Production Detail Planning, It calculates the latest possible start date for a work order on the basis of priority, resource capacities, factory calendar and many other factors. Calculation is done automatically. The work start date is determined for the entire work order, for each production position and for each individual routing Operation.

The machines, work centers, personnel groups and tools are reserved and the utilization can be displayed graphically to aid in re-planning and capacity adjustments.

With Resource planning, future utilization can also be planned, simulated and booked with the help of forecasts.

The pool control uses the result of the capacity planning and informs the worker in the shop which operations must be completed. It is automatically updated and can be recalculated through Pool generation/Scheduling.

1. The Production Order (Work Order) once generated, is entered into the beas production plan and visible under the Production menu within the beas module.
2. All open Production Orders are visible via the Production menu in beas.
3. The beas Production Planning functions allow users to review the following information:
 - a. Capacity Planning
 - i. Resource capacity by Work Center
 - ii. Pool allocation
 - b. Materials Availability
 - i. In Stock Quantities
 - ii. Purchased Quantities
4. The information above allows users to Re-Plan Work Orders in production based on the identified variables.



beas is equipped with production control for all types of production. Once planned, Work Orders are available for processing in the system. Work order tasks can be processed from the Work Order menu within Production via a structure view and task confirmation is displayed.

1. Work Orders are planned and released.
2. Work Order operations are driven by the associated Route and are distributed and scheduled across the associated Work Centers on the production floor.
3. Materials to be issued are defined by the BOM and allocated to the appropriate Operation as defined in the BOM and Route associated with the item to be produced.
4. Materials are issued to the Work Order in production and Operation time is recorded against the Work Order in production.
 - a. Time and Data collection can be done via a Terminal View function in beas or via the Work Order screen in the menu.
 - b. If Terminal View is used – the user will log in via a security code and see all allocated Work Centers. There they can open a Work Order, Issue Materials, and Record Time based on the Operation being performed.
 - c. If the Work Order screen is being used, the Work Order can be expanded to show all Materials and Operations to be updated. Users can use right mouse clicks to issue materials and record time against the Work Order.
5. Production Finish is recorded against the Work Order by the user
6. The Finished Good is then Received into the appropriate Warehouse within SAP Business One.



beas has many different calculation options where the Production Cost calculation is structured and available for use throughout the system. The Calculation concept is to allow users to define the structures to be used for Cost Calculations within the system.

The following calculation types are available:

1. Precalculation

- a. Used to calculate cost of an existing item or to set up a completely new calculation for a unique item. BOM and Route information is pulled from the Item Master automatically and all associated costs are displayed.
- b. This can also be used to perform a proposal calculation from SAP BO. The calculation can be opened directly from an SAP Quote. After configuration and calculation of the offered item, the price can be determined and entered in the SAP Quote. If an order should result, a Work Order can be created directly from the calculation.
- c. Precalculation calculates at full and marginal costs and allows the calculation of up to 5 lot sizes at the same time.

2. Batch calculation

3. Post calculation (incl. batch post calculation)

- a. The post calculation offers the following calculation types
 - i. Valuation of the assembly to be produced based on the actual values
 - ii. Determination of the accumulated actual values
 - iii. Comparison of actual values against plan values
- b. The actual value is the sum of
 - i. Material entries at the valuation price
 - ii. Reported times multiplied by the hour or minute rate stored in the work center
 - iii. Incoming invoices from external operations
- c. In addition, the standard surcharges are shown.
- d. The result is stored in the item master and in the work order position.
- e. The post calculation can be directly accessed through a work order or position or through calculation / post calculation.



This process flow describes the Engineer to Order Sub-Process Pick & Pack supported within SAP B1. This is a standard SAP B1 function and is described in SAP B1 documentation.



This process flow describes the Engineer to Order Sub-Process for QC - Goods Receipt. QC is a functional module within beas allowing the creation of Quality Control Plans. QC Plans can be created based upon the Goods receipt of an item

An inspection plan is always created automatically when one of the actions is performed and a QC plan is stored for the item.

Once an inspection plan is created, the Items associated are considered "Blocked" until they are released by QC. Release can be effected by

1. Reposting from a QC inventory to a primary inventory
2. Releasing the batch (with or without reposting)
3. Just closing the QC order.

The QC module allows for calculation of Samples, and Measurement Value Input by QC test.



This process flow describes the Engineer to Order Sub-Process for QC - Goods Finished Goods. QC is a functional module within beas allowing the creation of Quality Control Plans. QC Plans can be created based upon the Production issue, or Manually via batch or automatically if the batch shelf life date has passed

An inspection plan is always created automatically when one of the actions is performed and a QC plan is stored for the item.

Once an inspection plan is created, the Items associated are considered "Blocked" until they are released by QC. Release can be effected by

1. Reposting from a QC inventory to a primary inventory
2. Releasing the batch (with or without reposting)
3. Just closing the QC order.

The QC module allows for calculation of Samples, and Measurement Value Input by QC test.



This process flow describes the Engineer to Order Sub-Process for QC – Goods In Progress. QC is a functional module within beas allowing the creation of Quality Control Plans. QC Plans can be created based upon the Inspection plan stored in work sequence, or Manually via batch or automatically if the batch shelf life date has passed

An inspection plan is always created automatically when one of the actions is performed and a QC plan is stored for the item or Route Operation of an Item. Once an inspection plan is created, the Items associated are considered “Blocked” until they are released by QC. Release can be effected by

1. Reposting from a QC inventory to a primary inventory
2. Releasing the batch (with or without reposting)
3. Just closing the QC order.

The QC module allows for calculation of Samples, and Measurement Value Input by QC test.