SYSPRO Solutions I
Training Guide
SYSPRO Version 6.1 Port 45
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Introduction
SYSPRO core solutions

SYSPRO is a fully integrated business software solution. It assists in managing your supply chain business processes, from internal planning, analysis and reporting, management and control, execution and operational through to external integration.

In all businesses, whether you sell or distribute products or services, add value through activities, such as packaging, or are in full-blown manufacturing, there will usually be:

- a procuring phase with its associated supplier sourcing;
- an optional design, manufacturing and packaging phase;
- a distribution and warehousing phase (some more complex than others); and
- a prospecting and selling phase.

In addition, the world is moving towards more streamlined electronic communications and visibility through the Web in all aspects of the supply chain: from lead generation, prospecting, documentation sharing on both ends of the supply chain, customer relationship management and critical-information sharing. Interfaces with bar coding for purchasing and job receiving, put away, material issuing, picking and packaging and stock takes.

SYSPRO solutions, through standard solutions, customization and SYSPRO e.net solutions, provide all the tools an enterprise needs to manage and extend all activities of their supply chain.
SYSPRO solutions for external integration

SYSPRO provides a number of tools that enable external applications to communicate with SYSPRO and the SYSPRO data. In addition, SYSPRO is fully integrated with Microsoft Office. Triggers and Events enable the system to trap any anomalies of issues that need to be actioned as and when they happen. All these tools provide for an extended enterprise and communication with business partners.
SYSPRO execution and operational solutions
The SYSPRO solutions for execution and operational processes cover all routing aspects of the business from procurement and sourcing, through to design and manufacture, distribution and warehousing, and, finally, to selling and after-sales service.

SYSPRO management and control solutions
SYSPRO management solutions create the foundation for more successful supply chain management. These solutions optimize insight into the enterprise, enabling you to reduce operational and supply chain costs, enhance decision-making and respond more quickly to customers and the economic climate.

These solutions enable growing companies to maximize the planning and management of business processes to better position themselves in their respective markets.

SYSPRO analysis and reporting solutions
SYSPRO's Enterprise Reporting solutions close the widening gap between the volume of data and the organization's ability to use it effectively. From the SYSPRO Analytics business decision tool through to standard and customized reports, boardroom quality reporting and executive dashboards, SYSPRO has all the building blocks required to produce simple to sophisticated Enterprise Reporting and Queries.

SYSPRO planning solutions
These SYSPRO solutions include the functionality to handle the more complex facets of planning within your organization. The solutions within this sphere cover the full breadth of all planning from the factory floor to the executive boardroom.
What is Accounts Payable?

A business requires a means of recording invoices and then processing the payment of monies owed to suppliers for valid, authorized goods and services received at the appropriate time, and to reflect the entries correctly in the General Ledger.

Businesses need to purchase goods and services to meet the needs of their sales initiatives. For example, goods for resale or materials for production purposes need to be acquired. Businesses also need to keep track of the value of these goods and services acquired to pay for these charges and to determine charges for which payment has not yet been made. At a glance, financial executives can see what a company needs to pay, when this commitment is due and what settlement discounts would apply if paid early. Clerks can match supplier invoices to prices quoted to the buyers of the organization as well as what stores say the organization has received (i.e. you only pay for what you received at the price quoted to the buyer).

Charges need to be allocated correctly to an appropriate expense or asset account in the General Ledger. Payments need to be recorded in the General Ledger and at any point in time the General Ledger needs to reflect the total monies owing for all supplier invoices not yet paid, as reflected in the Accounts Payable ledger.

Process flow

Staff create requests to purchase goods to meet a customer demand or service. Requisitions may also be raised for goods and or services required for internal purposes (e.g. stationery, consulting services, etc.). Once these requisitions are approved then the buyers create purchase orders and a copy is given to the supplier and the stores for their records. Suppliers deliver the goods to the relevant warehouse. The stores personnel check the goods and quantities back to the original purchase order. The goods can be inspected and once accepted, receipted into stores. The suppliers then create an invoice based on their delivery note and your acceptance of their goods. This invoice is posted to the company and input in the Payables system and matched back to the relevant Goods Received Note received from stores. This invoice is then sent to the buyer for approval and thereafter it is paid according to the company's cash flow position and the invoice terms which have been defined.

The processes with the dotted borders are not performed in this training guide. They will be covered in detail in the Purchase Order Training Guide and the Goods Received Notes Training Guide. However, the flow does give you an overall picture of the complete process. Refer to the Require; Procure; Pay Business Process Training Guide for additional information.
SYSPRO Accounts Payable solution

The Accounts Payable system provides an efficient method for recording purchases and supplier invoices as well as making expense distributions. It can be installed standalone or integrated with other modules in the SYSPRO system.

Included are facilities for maintaining, verifying and reporting supplier account information. The module offers optional two-step invoice entry that allows users to enter, approve and then pay an invoice. Extensive audit trails and journals form an integral part of the module.

Against each supplier, invoice and transaction details are retained from which cash requirements, forecasting and purchase analysis may be printed. Suppliers can be held in local or foreign currency and multi-branch accounting is available. In addition, free-format checks and remittances can be designed.

Integration to other solutions

The Accounts Payable solution can be run standalone or it can be integrated to other solutions. These include:

- Accounts Receivable
  - Linking of Suppliers to Customers.
- Cash Book
Integrating Accounts Payable payments to Cash Book for bank reconciliation purposes.

- **Electronic Funds Transfer**
  Paying suppliers using electronic fund transfers (EFTs) which replaces the issuing of checks.

- **Contact Management**
  Supplier details are shown and can be edited from within Contact Management.

- **Work in Progress**
  Option to expense invoice details directly to job issues.

- **Landed Cost Tracking**
  Ability to register invoices in Accounts Payable in order to update costs around shipping of orders so that inventory controllers can receipt overseas orders into stock with actual costs. The expense disbursed is not shown against the supplier until the invoice is approved.

- **Purchase Orders**
  Option to select GRN matching which allows you to match supplier invoice values to a GRN.

- **General Ledger**
  Expenses and disbursed amounts update different accounts in the General Ledger.

**Module dependencies**

**Essential**
- None

**Recommended**
- Cash Book
- General Ledger
What is Accounts Receivable?

Most companies are in business to sell goods and/or services in order to make a profit. To achieve this, organizations need to have customers. To facilitate the management of customers, records must be kept of what is purchased, what is the value of outstanding invoices and the age of these invoices. Executives need to see what money is owing to the organization and when this money is due. Payments received from customers must be matched to the invoices in order to keep track of unpaid invoices.

As customers are at the heart of the business, it is important to keep track of the prices offered to customers for goods and services. The discount/price matrix is maintained at customer level and this provides organizations with the required flexibility when managing prices with customers. The matrix is used to automatically select the correct price at time of invoicing.

In some instances, customers have branches all over the country. Their requirement is to have goods delivered directly to their branches and invoices must be generated per branch. Payments are made centrally (i.e. the statement must go to head office, reflecting the purchases from each branch).

The Accounts Receivable system provides an efficient method for recording sales and customer payments. Integration to the General Ledger is flexible and the level of integration depends on the business requirements. Included are facilities for maintaining, verifying and reporting customer account information.

Audit trails and journals are extensive and form an integral part of the module.

For each customer, both invoice and transaction details are retained from which cash forecasting and sales analysis can be obtained. Customers can be held in local or foreign currency and multi-branch accounting is available. Additionally, free-format statements can be designed.

In summary a business needs a means to record all sales and payments received from its customers. In order to identify future sales opportunities, a record must be kept of what customers are purchasing and when.

Process flow

The decision is made as to which suppliers will be paid electronically. These can be permanent or temporary suppliers. The bank from which the funds are being transferred is defined as an Electronic Fund Transfer bank and the supplier is defined as being Electronic Fund Transfer supplier. When performing a payment run, from either the Accounts Payable module or the Cash Book module, these suppliers will be paid electronically. In SYSPRO the suppliers need to be added as beneficiaries in the Cash Book.

Once the payments have been approved an extract XML file is created which can then be transformed into the relevant format that the bank needs and sent to them for payment. SYSPRO will create the XML file but not the file that is needed for all the different banks because each bank has a different format. You need to get a 3rd party developer to create the special bank files.
The Accounts Receivable system provides users with extensive control of customer information. Analysis and reporting can be performed on an open-item or balance-forward basis using various ageing options. Information for a defined series of related customers may be accumulated into a single master account for consolidated statement printing. In addition, free-format statements and recurring invoices can be designed.

Receivables can be held in a local or foreign currency and the system complies with European Monetary Union (EMU) requirements. Extensive cash posting facilities exist, which include post dated check entry and posting, miscellaneous unassigned cash receipts and the facility to post cash received to invoices manually or automatically by invoice or aged date.

**Integration to other solutions**

The Accounts Receivable solution can be run standalone or it can be integrated to other solutions. These solutions include:

- **Accounts Payable**
  Linking of customers to suppliers.

- **Cash Book**
  Integration of invoice payment receipts and miscellaneous cash receipts.

- **Contact Management**
  Customer details are shown and can be edited in Contact Management and CMS Accounts can be converted into customers.

- **General Ledger**
  Integration of sales and cost of sales information.

  Integration of cash receipts (payments).

- **Sales Analysis**
  Accounts Receivable information is available on the following Sales Analysis reports:

  - Sales by salesperson, product class, and customer
  - Sales commissions
  - Sales tax schedules
• Turnover reports

• **Sales Orders**
  The following Sales Order information is transferred to Accounts Receivable:
  • Sales and cost-of-sales-related distributions
  • Sales Order processes that update stock quantities:
    • Order Entry (allocations)
    • Invoice printing
    • Credit invoice printing (returns to inventory)
    • Debit invoice printing (issues)
  • Document print capability:
    • Invoices/debit notes/credit notes
    • Delivery notes and order acknowledgments
  • Customer information, if required, can be passed to the following modules:
    • Purchase Orders
    • Blanket Sales Orders
    • Counter Sales
    • Return Merchandise
    • Quotations
    • Work in Progress

**Module dependencies**

**Essential**
• None

**Recommended**
• Cash Book
• General Ledger
• Sales Orders (especially if you wish to print delivery notes, invoices, debit and credit notes)
What is Cash Book?

'Cash, being the most liquid form of money, is of prime importance to the enterprise. Cash must be carefully administered and controlled, and the cash flow recorded in the cash journal. The balance on the cash account must regularly be reconciled with the bank balance'. (Accounting An Introduction, Faul, Pistorius, Van Vuuren).

Most businesses are in business to sell goods and/or services in order to make a profit. In order to do this, organizations need to have customers and suppliers. To facilitate the management of cash inflow and outflow, an organization requires a Cash Book in which to record all cash transactions.

As cash flow is a crucial aspect in any business, it is important to accurately record all receipts and payments and keep a record of the transactions that have been processed by the bank (bank reconciliation). You would use a Cash Book to collect all the cash transactions (payments and receipts) and ensure the effective documentation of all cash transactions.

Process flow

The Cash Book solution provides an efficient way of recording all withdrawals and payments that are made by organizations. All payments made to suppliers (including electronic payments) and receipts from customers are automatically posted to the Cash Book as well as sundry payments and receipts.

Repetitive payments (e.g. automatic payments for insurance premiums) can be set up to post automatically to the Cash Book on the day that they are due to go through the bank.

If required, the bank statement can be downloaded into the system and the converted file can be used to automatically reconcile items on the Bank Statement to the Cash Book.

SYSPRO Cash Book solution

The Cash Book system allows you to set up multiple banks in both local and foreign currency. You can run it standalone or integrated with other modules in the SYSPRO system. In addition, you can produce online checks and remittances, bank reconciliation statements, consolidated statements and a bank balance report. An electronic bank reconciliation facility is also available.
It provides a daily means of recording details about sundry deposits and withdrawals, maintaining Cash Book bank balances, reconciling and adjusting entries, and printing online checks. Entries can be posted manually or automatically and the amounts can be distributed to a number of ledger accounts, including those belonging to other companies.

The system provides the facility of multi-period accounting that enables you to post transactions to previous months, making it appear as if the transaction actually occurred in that prior period. This feature is useful for month end procedures where, typically, documentation relating to the current months' business cycle has not yet been completed.

You can close off the current months' processing; complete all the procedures relating to a month end; and then at a later stage still post transactions to the previous month. It is for this reason that many financial reports within the system allow you to produce reports for the current month, the previous month, or the month prior to the previous month.

Payments to suppliers are normally recorded in the Accounts Payable system and receipts from customers are normally recorded in the Accounts Receivable system. These transactions can be integrated to Cash Book, thereby avoiding double-capture.

Although this system is mainly used to capture movements on bank accounts, it can also be used for petty cash.

The effective projection of currency-based cash flow requirements is facilitated by the capability to create multiple on-line cash flow models from a variety of inflow and outflow data, such as receivables, payables, cash book, general ledger, sales, purchasing, demand forecasts and material requirements.

The Cash Flow Forecasting model enables managers to view their company's projected cash position into the future by applying outstanding payables (cash requirements), receivables (payment projections) and other cash projections to the current bank balances. The information is presented in graphs and listviews in customizable panes.

Integration to other solutions
The Cash Book solution can be run standalone or it can be integrated to other solutions. These solutions include:

- **General Ledger**
  Expenses and disbursed amounts update different accounts in the General Ledger.

- **Accounts Payable**
  Payments made to suppliers update the Cash Book, if integrated.

- **Accounts Receivable**
  Deposits made by customers update the Cash Book, if integrated.

- **Electronic Funds Transfer**
  Payments to supplier banks can be processed electronically.

- **Work in Progress**
  Withdrawals can be expensed directly to a job issue.

Module dependencies

**Essential**
- None

**Recommended**
- General Ledger
What is General Ledger?

All Businesses require a General Ledger to record all transactions that are processed by the organization. Regardless of the type of business, the General Ledger is the book of entry which controls budgets, provides a trial balance, income statement and balance sheet. The General Ledger can run as a stand alone module or it can be integrated to sub-modules. Transaction details are stored in the sub-ledger, with summaries stored in the General Ledger. The General Ledger is usually used to report on historical information. Generally the ledger is updated after the event.

There are statutory requirements for all organizations to comply with various legislation. The minimum requirement is to produce a set of books which can be assessed in terms of tax which is payable to the government.

The coding of the Chart of Accounts is key to ensuring that the various reporting requirements can be met. The minimum number of accounts required is dependent of the level of detail required by the organization.

The General Ledger module is designed to be flexible and easy to use. It offers highly sophisticated reporting, enabling the end user to design financial reports in virtually any format and sequence. Accounts Payable, Accounts Receivable, Cash Book, Assets Register, Inventory and Work in Progress all integrate to the General Ledger module.

Reporting is simple, yet extensive by using the built-in General Ledger Report Writer, or by passing the information to a number of third-party software products. It supports unlimited history. The query is extensive with impressive graphic and drill down capabilities. Up to 10 different budgets can be defined.

The General Ledger normally stores all values in local currency, but it is possible to have up to 10 alternative currencies within the General Ledger system for reporting purposes.
Process flow
The general ledger is the core of your company's financial records. These constitute the central 'books' of your system, and every transaction flows through the general ledger. These records remain as a permanent track of the history of all financial transactions since day one of the life of your company.

SYSPRO General Ledger solution
The General Ledger system is designed to be flexible and easy-to-use, allowing you to design financial reports in virtually any format and sequence. Reporting is simple, yet extensive by using the built-in Financial Report Writer, or by passing the information to a number of third-party software products. It supports unlimited history. The query is extensive with impressive graphic and drill-down capabilities. Up to 10 different budgets can be defined.

The General Ledger normally stores all values in local currency, but you can optionally have up to 10 alternative currencies within the General Ledger system for reporting purposes.
Integration to other solutions
The General Ledger solution can be run standalone or it can be integrated to the following solutions:

- **Accounts Payable:**
  Invoice posting expenses and payments made to suppliers.
- **Accounts Receivable:**
  Sales invoices and cash receipts.
- **Cash Book:**
  Deposit and withdrawal transactions processed within the Cash Book.
- **Assets Register:**
  Additions, disposals, revaluations and depreciation of assets.
- **Inventory:**
  Inventory movements.
- **Work in Progress:**
  Part-billings and labor posting.
- **Trade Promotions:**
  Deductions, accruals and off invoice line promotions.
- **Counter Sales/Point of Sale:**
  Counter sales/point-of-sales payments and counter sales/point-of-sales transactions.
- **Purchase Orders:**
  This solution does not directly integrate to the General Ledger; however, you can specify a ledger code at the time of entering a purchase order line for a non-stocked item that is not allocated to a job.
- **Landed Cost Tracking:**
  The landed cost tracking solution does not integrate directly to General Ledger, but does affect Inventory integration to General Ledger.
- **Activity Based Costing:**
  Requires an integration account for each of the cost elements before any transactions can be entered. The Activity Based Costing solution interacts with Inventory, Sales Orders and Accounts Receivable and therefore relies on the integration of these modules to determine the relevant accounts for transaction postings.

Integration from these solutions can be in summary or detail.

Module dependencies

**Essential**
- None
What is Inventory?

All Businesses who sell or manufacture products require Inventory. As Inventory is an asset which ties up capital, it must be managed smartly to ensure effective utilization of capital. There are many costs associated with holding inventory. These include, capital, insurance, holding costs, obsolescence, shrinkage and theft. Other costs include costs of not having the right product at the right time. This can result in manufacturing delays and lost sales.

It is therefore essential to have an effective tool to manage Inventory. A system is required which will identify the individual component items. The item master includes information on the type of product (manufactured, bought, etc.), buying rules, preferred supplier, lead times, tracking, etc. This information is vital to plan requirements and to manage the items.

Inventory is the heart of the system and integrates with a number of other solutions (Purchase Orders, Sales Orders, Work in Progress, Bill of Materials, General Ledger).

All movement (receipts, issues to Work in Progress, transfers to other warehouses, adjustments, expense issues, etc.) of items must be updated in the system. This provides management with a tool to manage inventory.

In order to ensure that the physical stock and the computer stock are accurate, stock takes should be taken on a regular basis (daily, weekly, monthly, quarterly or annually). The frequency of the stock take will be determined by the nature of the business.

In summary a business needs a means to record and process all Inventory transactions and to reflect these entries accurately in the General Ledger.

The Inventory system provides an efficient method for recording all movement types which affect inventory. Included are facilities for maintaining, verifying and reporting Inventory item master information.

In addition, this solution offers a two-step receipting process; allowing users to receipt items into inspection and after the items have been checked to accept them into Inventory. Items which fail quality checks can be sent back (suppliers for purchases and Work in Progress for manufactured items).

For each Inventory item, a detailed record is kept of all movements of the item. This provides a history to facilitate purchasing and manufacturing. If items are manufactured for stock, this history will help with the creation of a forecast.

Inventory can be defined as those stocks or items used to support production (raw materials and work in process items), supporting activities (maintenance, repair, and operating supplies), and customer service (finished goods and spare parts). Demand for inventory is dependent and independent. Inventory functions are anticipation, hedge, cycle (lot size), fluctuation, (safety, buffer, or reserve), transportation (pipeline), and service parts.

Inventory management is the branch of business management concerned with the planning and control of inventories.

Inventory control is the activities and techniques of maintaining the desired levels of items whether raw materials, work in process, or finished products. A synonym for inventory control is materials control.

Inventory buffer is inventory used to protect the throughput of an operation or the schedule against the negative effects caused by statistical fluctuations. Synonyms for inventory buffer are safety stock, buffer stock or fluctuation inventory.

Inventory turnover is the number of times that an inventory cycles, or ‘turns over’, during the year. A frequently used method to compute inventory turnover is to divide the average inventory level into the annual cost of sales.

For example:

An average inventory of 3 million divided into an average cost of sales of 21 million means that inventory turned over seven times.

Inventory accounting is the branch of accounting dealing with valuing inventory. Inventory may be recorded or
valued using either a perpetual or a periodic system. A perpetual inventory record is updated frequently or in real time, while a periodic inventory record is counted or measured at fixed time intervals, e.g. every two weeks or monthly.

Inventory valuation is the value of the inventory at either its cost or its market value. Because inventory value can change with time, some recognition is taken of the age distribution of inventory. Therefore, the cost value of inventory is usually computed on a first-in-first-out (FIFO), last-in-last-out (LIFO) basis, average cost basis, last cost basis, or a standard cost basis to establish the cost of goods sold.

**Process flow**

Orders are received via post, fax, Email, or salesperson. The order gets entered and a pre-delivery document is printed for the stores, where the stock is dispatched. If there are any stock shortages, the buyer or planner creates purchase and work orders. When the goods arrive at the stores, they are receipted into stock and receipts or GRN documents are printed. Back orders are also filled.

**SYSPRO Inventory solution**

SYSPRO Inventory enables effective customer servicing and improved profits by providing superior inventory that optimizes stocking levels.

It forms the core of the accounting, distribution and manufacturing facilities and is designed to integrate with all the major functions of the systems and to provide flexible reporting on inventory holdings. All movements against inventory items are recorded and can be reported on. Features include multiple warehouses and bin numbers, multiple costing methods, a full Kardex facility, a stock take system and extensive reporting.

**Integration to other solutions**

It can be installed standalone, or integrated with other solutions in the SYSPRO system, including:

- **Lot Traceability**
  
  Inventory stock items are flagged as traceable against which transactions are recorded.

- **General Ledger**
Inventory and GRN transactions are recorded in the General Ledger.

- **Inventory Optimization**
  Inventory Optimization uses movement information resident in inventory.

- **Purchase Orders and Blanket Purchase Orders**
  Inventory stock code and warehouse information is used by purchase orders, while purchase orders provides outstanding p/o quantities and due dates in the Inventory queries.

- **Landed Cost Tracking**
  Stock code and tariff code information is stored in Inventory.

- **Sales Analysis**
  Uses stock code and product class information.

- **Sales Orders and Blanket Sales Orders**
  Uses stock code quantity and warehouse information.

- **Return Merchandise**
  Uses stock code quantity and warehouse information.

- **Bill of Materials**
  Uses stock code and part category information.

- **Engineering Change Control**
  Stock code revision/release numbers are stored in Inventory and used in ECC.

- **Quotations**
  Uses stock code and warehouse information.

- **Product Configurator**
  Uses stock code and warehouse information.

- **Work in Progress**
  Issue and receipt stock to and from jobs.

- **Requirements Planning**
  Uses stock code quantity and warehouse information.

- **SYSPRO Factory Scheduling**
  Uses stock code and warehouse information.

**Module dependencies**

**Essential**

- None
What is Purchase Orders?

Businesses need to purchase goods and services to meet the needs of their sales initiatives. For example, goods for resale or materials for production purposes need to be acquired. They need to keep track of the value of these goods and services acquired to pay for these charges and to determine charges for which payment has not yet been made. At a glance, financial executives can see what a company needs to pay, when this commitment is due and what settlement discounts would apply if paid early. Clerks can match supplier invoices to prices quoted to the buyers of the organization as well as what stores say the organization has received i.e. you only pay for what you received at the price quoted to the buyer.

Charges need to be allocated correctly to an appropriate expense or asset account in the general ledger. Payments need to be recorded in the general ledger and at any point in time the general ledger needs to reflect the total monies owing for all supplier invoices not yet paid, as reflected in the accounts payable ledger.

The Purchase Order system provides an efficient method for recording inventory requisitions from users and purchases from suppliers. Included are facilities for maintaining, verifying and reporting supplier delivery performance reports, supplier contracts

Process flow

Staff request to purchase goods to meet a customer demand or service. Requisitions may also be raised for goods and or services required for internal purposes (e.g. stationery, consulting services, etc.) Once these requisitions are approved then the buyers create purchase orders and a copy is given to the supplier and the stores for their records. Suppliers deliver the goods to the relevant warehouse. The stores personnel check the goods and quantities back to the original purchase order. The goods can be inspected and once accepted, receipted into stores. The suppliers then create an invoice based on their delivery note and your acceptance of their goods. This invoice is posted to the company and input in the Payables system and matched back to the relevant Goods Received Note received from stores. This invoice is then sent to the buyer for approval and thereafter it is paid according to the company’s cash flow position and the invoice terms which have been defined.
The Purchase Order solution includes a Goods Received Notes Suspense System (GRN) for Accounts Payable invoice matching; a Requisition System and a Supplier’s Performance report, along with free-format requisitions and foreign currency options. Goods can be received directly into a warehouse or can go through an inspection phase. Various pricing mechanisms can be used, such as contracts with suppliers, foreign prices, the warehouse cost or last cost from the supplier.

Integration to other solutions
The Purchase Orders solution can be run standalone or be integrated to other solutions. These solutions include:

- **Inventory**
  Stock code master information is used from inventory, as well as stock availability.

- **Work in Progress**
  Stock issues can be linked to a job directly from Purchase Orders.

- **Sales Orders**
  Purchase orders and requisitions can be raised directly from sales orders and back orders. The system can be configured so that when the linked purchase order is receipted, it updates the sales order quantity-to-ship.
• **Requirements Planning**
  Purchase orders are used in the calculation of supply, and suggested requisitions generated by the Requirements Calculation can be transferred to live requisitions and purchase orders.

• **Accounts Payable**
  Supplier master information is used from accounts payable while purchase order GRN transactions are used for GRN matching purposes during accounts payable payment processing.

• **Quotations**
  Purchase orders and requisitions are raised in Quotations

• **Landed Cost Tracking**
  Foreign purchase orders are captured in purchase orders and landed cost tracking is used to determine shipment due dates.

• **Factory Scheduling**
  Advanced scheduling takes note of purchase order information.

**Module dependencies**

**Essential**
- None

**Recommended**
- Accounts Payable
- Inventory
What is Goods in Transit?

In the SYSPRO context, Goods in Transit is defined as the policies, structure, processes and controls used to manage the movement of inventory between branch warehouses in a multi-warehouse environment.

In order to maintain appropriate inventory levels at branch warehouses and meet target customer service levels, if you have a business, which operates in a multi-warehousing environment, you need to be able to plan, distribute, monitor and control inventory moving across your internal supply chain.

At a minimum, you need to be able to easily create and receipt stock transfers for each warehouse and have visibility to the detail of what is in transit between warehouses. To maintain strict control over inventory in this environment, you require mechanisms to identify and adjust exceptions as they arise and to reconcile transfers sent and received in terms of value and quantity. You may also have a requirement to record warehouse back orders in the system and to electronically produce paperwork to accompany transfers.

Additionally, depending on the complexity and size of your business, it may be beneficial to implement Distribution Requirements Planning (DRP) in conjunction with Material Requirements Planning (MRP) to generate internal stock transfers based on customer or replenishment orders by warehouse.

The SYSPRO Goods in Transit (GIT) system provides the facilities to create manage and monitor transfers between multiple warehouses. Used in conjunction with the SYSPRO Sales Order solution, it provides additional functionality to record back orders in the system for multiple warehouses via special order types called Supply Chain Transfers. If the SYSPRO Requirements Planning solution is installed, then the GIT functionality extends to include Distribution Requirements Planning. If the SYSPRO General Ledger solution is installed, then the GIT system forms the transactional sub-ledger in Inventory and provides mechanisms to easily reconcile the sub-ledger to the General Ledger.

GIT functionality is used in a multi-warehouse distribution environment and is usually implemented by the inventory planning, logistics and supply chain management staff of a company in conjunction with the financial and sales management teams.

Process flow

The Goods in Transit system provides a mechanism for greater management control over stock items that are in the process of being transferred between warehouses. It achieves this by monitoring warehouses transfers and supply chain transfers.

Warehouse transfers are generated where the transfer of an item from a source warehouse generates a detailed record of the transaction. Stock is depleted from the source warehouse at the time of confirming each line of the transfer.

At the receiving warehouse, a review process with extensive selection criteria enables you to control the receipt of this stock. Supply chain transfers are generated. The capture of a supply chain transfer order enables you to reserve stock for transfer at a later point in time (as opposed to an immediate transfer out).

You should consider implementing the Goods in Transit system if you manage multiple warehouses and transfer stock regularly between these warehouses.
Goods in transit

SYSPRO's Goods in Transit system provides a mechanism for greater management, control and visibility over stock items that are in the process of being transferred between warehouses. It also forms a core component of the Distribution Requirements Planning system and provides a primary reconcilable book of account.

The Goods in Transit system enables you to record warehouse transfers and produce the necessary paperwork. Visibility is maintained since the entire transaction is tracked from start to completion. Stock is depleted from the source warehouse at the time of confirming each line of the transfer. At the receiving warehouse, a simple review facility enables receipt of transfer items based on selection criteria and processing of exceptions based on the security settings assigned to the receivers. A cost multiplier percentage or value can be applied to receipts to take account of transport costs.

The queries and reports enable monitoring of transfer items, and reconciliation of transfers between source and target warehouses as well as reconciliation of transfer values to the General Ledger. The result is a transparent, audited, documented procedural approach to goods in transit.

An immediate transfer facility is also provided.

Supply chain transfer orders in sales order entry enable you to reserve stock for transfer at a later point in time and
provide demand and supply input to SYSPRO's Distribution Requirements Planning feature.

Integration to other solutions
As Goods in Transit system is part of the Inventory solution, it cannot be run standalone. The other SYSPRO solutions to which the Goods in Transit system integrates include:

- **Inventory** When you transfer out stocked items, the stock on hand is depleted in the source warehouse and the in-transit quantity of the stock code in the target warehouse is increased. When you transfer in stocked items at the target warehouse, the on-hand quantity of the target warehouse is increased and the in-transit quantity is decreased.

- **General Ledger** Transfers Out, Transfers in and Transfer Adjustment transactions you process in the Inventory Movements Goods in Transit program, flow through to the General Ledger solution via the Inventory Distribution Report which you print from the Inventory solution.

- **Sales Orders** If your branch warehouses wish to place orders in the system to reserve stock and record back orders, they can use a special order type called a Supply Chain Transfer Order. When you enter the SCT order, stock allocations are created in the same way as with a standard Sales Order. When you release the SCT and print the user-defined SCT Transfer document (takes the place of an invoice), the stock on hand for the item at the source warehouse is reduced and the in-transit quantity of the target warehouse is increased. In addition, a goods in transit reference/s is created in the Goods in Transit system and the GIT system takes control of the process from this point.

- **Requirements Planning** You can configure the Requirements Planning solution to take account of goods in transit between warehouses as well as open Supply Chain Transfer orders. When you run the Requirements Calculation program, the system calculates the net requirement for each stock code/target warehouse combination and offer suggestions to satisfy the demand generated at each level of your supply chain structure.

- **Lot Traceability** Traceable items transferred via the GIT system are subject to the controls of the Lot Traceability solution.

Module dependencies
Essential
  - Inventory
**What is GRN?**

Often there is a delay between when goods or services are delivered to a business and when the invoice is received for payment from the supplier. Depending on the size and nature of the business, it may be a requirement to record the accrual of the liability for the goods received until the invoice is processed.

The business may wish to track the invoice values charged for goods or services versus what was originally authorized by purchasing, as well as what was actually delivered.

Comparative reporting between current cost and purchased cost may be required. Where standard costing is in use, recording variances between standard cost and purchased cost may be necessary for comparative reporting and periodic revaluation of standards.

The Goods Received Note (GRN) Suspense system provides the ability to electronically reconcile delivery values with supplier invoice values, raise accruals in the correct accounting period and track cost and purchase price variances.

**Process flow**

The GRN Suspense system is an optional facility, which enables you to automatically create detailed GRN and accrual accounting entries for goods received, until you receive and match the supplier invoice.

When you receipt the goods against a purchase order, the system:

- generates a GRN record or GRN records in the GRN Suspense system with all the relevant information including supplier and stock code receipt quantity and value information
- debits the Inventory or expense ledger code with the relevant values
- credits the GRN Suspense control account with the relevant values.

When you receive and capture the supplier invoice, it is matched to the GRN.

At this point

- the GRN record is reduced by the value and quantity matched
- the GRN Suspense account is debited
- the Accounts Payable control account is credited.

The GRN system also provides an audit trail of transactions, a facility to adjust entries within the GRN system and a price variance monitoring facility whereby any variance detected between the receipted cost and the invoice cost, is posted to the relevant variance account and reported.
Goods received notes (GRN) system

The GRN Suspense system enables you to electronically reconcile delivery values with supplier invoice values, raise accruals within the correct financial period and track cost and purchase price variances. This enables you to keep tight control over your purchasing costs for raw materials and other goods and services and ensure that you are
paying only for what was authorized and actually delivered.
Integration to other solutions

The GRN Suspense system integrates with the following solutions:

- **Accounts Payable**
  When posting invoices you can match the quantity and value back to an electronically generated GRN.

- **Inventory**
  Any additions or changes made to the GRN updates the Inventory and by printing the Inventory Journal and then GRN Distribution report the General Ledger is manually updated.

- **General Ledger**
  The link to general ledger is via the Accounts Payable and Inventory solutions.

Module dependencies

As the GRN Suspense system is a subsystem of the Purchase Orders solution, the Purchase Order solution must be installed.

In order to utilize the GRN Suspense system effectively, it is highly recommended that you install the following solutions:

- Inventory
- Accounts Payable (for invoice matching)
- General Ledger (with Accounts Payable and Inventory integrated in summary or detail).
What is Sales Orders?

Order processing is the activity required administratively processing a customer's order and making it ready for shipment or production.

Order entry is the process of accepting and translating what a customer wants into terms used by the manufacturer or distributor. This can be as simple as creating shipping documents for a finished goods product line, or it might be a more complicated series of activities, including engineering effort for make-to-order products.

Order processing is the activity required to administratively process a customer's order, ensuring that necessary actions are triggered to fulfill demand. Until such times as the demand is met, visibility of the demand should not be lost. All aspects relating to the demand should be tracked and reported. In addition, information should be available for analysis when the demand cannot be met leading to a situation of lost sales and revenue. This information could be vital for future action, thereby ensuring that the pattern is not repeated and resulting yet again in future lost sales.

The Sales Order module can be one of the most valuable business tools in a company, if it is used effectively and structured correctly to meet the business needs.

Process flow

Orders are received via post, fax, Email, or salesperson. A quote is generated and on acceptance converted into an order. The order gets entered and a pre-delivery document is printed for stores or factory for manufacturing.

When the goods are ready for delivery a delivery note is printed. The customer collects the goods or the goods are delivered to the customer. When the delivery is completed an Invoice gets generated and the customer is invoiced for the goods received.

At the end of the month the Sales Manager requests a report with the sales of the month and a sales analysis is done to determine the profit or loss for the month.

SYSPRO Sales Order solution

The Sales Orders system is the heart of the distribution section of SYSPRO.
It enables the capture of sales orders in a variety of user-defined formats for a variety of purposes: to allocate stock (if appropriate); maintain back orders; produce picking slips, confirm orders, process inter-branch transfers, supply chain transfers and/or invoices, as required.

This system offers full invoicing with back order facilities, as well as online or batch documents. An available-to-promise query can be accessed and a supplier/customer stock code to SYSPRO stock code cross-reference is available.

Various pricing methods are offered within this module, including specific contract setup with a customer for specific products over a defined period of time.

In the event of stock shortages, stock can be replenished automatically by raising a purchase order, or creating a supply chain transfer from a supplying warehouse, or creating a job for made-in items.

An extensive credit and terms checking facility exists, which can be tailored according to specific requirements.

**Integration to other solutions**

The Sales Orders solution cannot be run standalone and is dependent on Accounts Receivable. It integrates to the following solutions:

- **Accounts Receivable**
  Customer information is used to enter sales orders.

- **Sales Analysis**
  Sales information used for sales analysis and reporting is created and stored in Sales Orders.

- **Product Configurator**
  Within Sales Orders the Product Configurator program can be used to easily configure a product based on pre-defined configurator rules.

- **Counter Sales**
  Counter sales are recorded and managed in sales orders.

- **Blanket Sales Orders**
  Scheduled orders are stored in sales orders.

- **Return Merchandise Authority**
  Sales Order information is used when issuing and receipting returns and can also be created during cross-shipment.

- **Purchase Orders**
  Purchase orders and requisitions can trigger sales orders.

- **Trade Promotions**
  Trade Promotions, promotions, deductions and accruals can be applied during sales order entry.

- **Inventory**
  Provides the stock code information for sales orders, including pricing and availability.

- **Lot Traceability**
  Lot traceable stock items are entered in sales orders.

- **Requirement Planning**
  Material Requirements Planning creates demand based on sales orders.

- **Quotations**
  When a quotation is confirmed and you select to create a new sales order or append to an existing sales order, the relevant quotation information is used to create the sales order header and detail lines.

- **Work in Progress**
  Jobs can be allocated to a sales order.
Module dependencies

**Essential**
- Accounts Receivable

**Recommended**
- Inventory
What is Sales Analysis?

Sales Analysis is a procedure involving the gathering, classifying, comparing, and studying of company sales data. It may simply involve the comparison of total company sales in two different time periods. It is a determination of the extent to which a sales force has met its sales objectives within the specified time frame.

Sales and operations planning is a process that provides management the ability to strategically direct its businesses to achieve competitive advantage on a continuous basis by integrating customer-focused marketing plans for new and existing products with the management of the supply chain. The process brings together all the plans for the business (sales, marketing, development, manufacturing, sourcing, and financial) into one integrated set of plans. It is performed at least once a month and is reviewed by management at an aggregate (product family) level. The process must reconcile all supply, demand and new product plans at both the detail and aggregate level and tie back to the business plan. It is the definitive statement of the company's plans for the near to intermediate term covering a horizon sufficient to plan for resources and to support the annual business planning process. Executed properly the sales and operation planning process links the strategic plans for the business with its execution and reviews performance measurements for continuous improvement. A source of information to achieve this plan is the Sales History reports.

Process flow

Orders are received via post, fax, e-mail, or salesperson. A quote is generated and on acceptance converted into an order. The order gets entered and a pre-delivery document is printed for stores or factory for manufacturing.

When the goods are ready for delivery a delivery note is printed. The customer collects the goods or the goods are delivered to the customer. When the delivery is completed an Invoice gets generated and the customer is invoiced for the goods received.

At the end of the month the Sales Manager requests a report with the sales of the month and a sales analysis is done to determine the profit or loss for the month.

SYSPRO Sales Analysis solution

The Sales Analysis system is the focal point for the accumulation of sales data generated from other modules. Sales...
history is accumulated in a wide variety of user-defined formats such as: salesperson, product class, customer, warehouse, geographic area, customer class, stock code, order type and branch. Information can be displayed in bar charts or reports. Various targets can be entered based on user-defined groupings.

Integration to other solutions
The Sales Analysis solution cannot be run standalone as it is dependent on Accounts Receivable. It integrates with the following solutions:

- **Accounts Receivable:**
  The sales analysis period end is closed when the accounts receivable period end is run. Customer information and stored sales information is transferred to Sales Analysis.

- **Sales Orders:**
  Sales information updates sales analysis.

- **Inventory:**
  Availability of stock and prices of stock codes is passed to sales analysis.
  Stock code master information and pricing is used in sales analysis.

Module dependencies

**Essential**
- Accounts Receivable

**Recommended**
- Inventory
- Sales Orders
Manufacturing overview

Manufacturing is the conversion of materials into some form of finished product for resale. The whole cycle begins with a demand coming from the customer. Materials, people, machines and capacity need to be made available to provide the finished product in time for delivery to meet the needs of the customer.

The manufacturing company begins with a Business Plan which is a proposal for the overall business activity to meet the organization objectives, taking into account the market place, new product development, required return on investment and available manufacturing and financial resources.

The Business Plan then serves as the main input to the Sales and Operations Plan which is the Business Plan converted into family groups of items in coarse time periods. This is the executives’ plan or the master scheduler to turn into a manufacturing plan. Resource Planning is used to verify the viability of the production plan.

The sales and operations plan is then converted, by the master scheduler, to a detailed schedule. This is normally defined at the finished goods part number level in much finer time periods than those used in the production plan. The master scheduler uses rough-cut capacity planning to check the balance and viability of the master schedule. The master schedule is the plan on which all subsequent plans are built.

The master schedule is the main input to the Materials Requirements Plan. Material Requirements Planning tests to see where future material shortages will occur and recommends actions to prevent those shortages occurring using inventory rules and the full horizon of the Master Production Schedule.

Capacity Requirements Planning follows, receiving all manufacturing orders from Material Requirements Planning and breaking each order down into individual operations. It compares the standard hours required to those stated to be available per time period per work center.

Production Activity control is a set of principles, approaches and techniques used by managers to plan, schedule, control and evaluate manufacturing operations on the shop floor.

The manufacturing company aims to:

- Improve customer service levels
- Reduce Work in Progress
- Reduce throughput time
- Reduce set-up and change over times
- Reduce cycle intervals for production and deliveries
- Reduce number of suppliers to the minimum reliable ones
- Reduce number and level of components in the product or service
- Make the item simple to manufacture, provide goods or services without error
- Arrange the work place to eliminate search time
- Cross-train for mastery of more than one job
- Record and retain production, quality, and problem data at the work place
- Practice preventative maintenance and improve human job capability through training and education.

Remember: What the customer wants: High quality, on time delivery, low cost and flexibility.

Material Requirement Planning (MRP) is a computer-based system which addresses the nature of demand and how material supply is planned to satisfy that demand. The modules involved are Inventory control, purchase orders, bill of materials, job costing, quotations and estimating, factory documentation, material requirements planning and sales orders.

Not everyone will use all the manufacturing features but there is still a need to understand how the system fits together.
What is Bill of Materials?

A bill of material (BOM) is a listing of all the sub-assemblies, intermediate parts, and raw materials that go into a parent assembly showing the quantity of each (including scrap) required to make a parent assembly. It is used in conjunction with Requirements Planning to determine the items for which purchase requisitions and production orders must be released. A bill of material may also be called the ‘formula’ or ‘recipe’.

A routing is a set of information detailing the method of manufacture of a particular item. It includes the operations to be performed, their sequence, the various work centers to be involved, and the standards for set-up and run time. The routing can also include information on tooling, operator skill levels, operation instructions, testing requirements, etc. Synonyms for routings are bill of operations, instruction sheet, manufacturing data sheet, operation chart, operation list, operation sheet, routing sheet.

The accuracy of your bills of material determines the efficiency and accuracy of your manufacturing costing, procurement, shop loading and ultimately, customer service.

Bill of materials has a wide variety of uses for a manufacturing company. Some examples are:

- **Product definition**: The bill of materials specifies the components and quantities used to make a product. This aids a company in tracking inventory movements and job issues, and in controlling engineering design files of product structures.

- **Manufacturing instructions**: The product and how it is fabricated is described so there are no misunderstandings about the product make up and the shop floor operations required to produce it.

- **Engineering change control**: The bills of materials have to be maintained accurately. This maintenance is sometimes needed to correct errors on the original document, but can also be a result of product performance improvements, cost reductions, or the incorporation of additional features. Implementation of these changes must consider the replacement of the old product, introduction of the new and could possibly include announcements to the market place. Engineering Change Control is not part of this workbook.

- **Costing**: The bill of materials form the nucleus of a product costing program. Combining the cost of materials necessary to produce a product with the labor and work center conversion costs provides an accurate picture of the product’s total cost at each level in the bill.

- **Pricing**: Bill of materials can be used to cost products sold to customers. This is especially true for products made from options. Sales Order Entry used with single level bill of materials helps cost the end product.

- **Pick or Kit lists**: When manufacturing a product from many components a list of parts or materials to be withdrawn from stores prior to the manufacturing process is often needed. In SYSPRO one could use the Trial Kitting list to check inventory availability and secondly to pick the components prior to job issue.

- **Capacity Planning**: Companies use Bill of Materials in conjunction with Requirements Planning to calculate the planned capacity loading for the shop floor. This is an important scheduling function for calculating when jobs need to be released for manufacture on the shop floor.

- **Lead Time Calculation**: Manufacturing companies need to know how long it takes to purchase parts and build components for their different products so they can quote valid lead times to the customer.

**Process flow**

The engineering department needs to constantly make sure that the current structure and routings of each product are still valid. They also need to ensure that the lead time for items have been entered correctly.

The costing of each item needs to be checked regularly especially if standard costing is in use. They also need to make sure that there are no stock codes held on the master file that do not belong to a valid structure.
### SYSPRO Bill of Materials solution

The Bill of Materials system enables you to construct quantity or percentage relationships between assemblies (final product) sub-assemblies (bulk batches) and components (raw materials) using up to 15 levels and you can assign each component (raw material) to a selected operation in the parent routing.

You can model the routing (i.e. the relationship between work centers and the time taken by the various elements of capacity usage) of the product to accommodate varying size batches, milestone operations, progressive scrap and dynamic elapsed times. The routing can also include information on tooling, operator skill levels, operation instructions, testing requirements, etc.

The complete bill forms the basis for material and capacity planning, shop floor control and costing. Full bill of material costing and what-if costing facilities are provided and you can implement product change control if you use Bill of Materials in conjunction with the Engineering Change Control system.

<table>
<thead>
<tr>
<th>1. Structures and Routings</th>
<th>Check that structures and routings are correct</th>
<th>Follow process through the factory</th>
<th>Sign off if correct or amend if necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Lead Times</td>
<td>Check that lead times are entered correctly against bought out and made in items</td>
<td>Run the Lead Time Calculation</td>
<td>Check that lead times are acceptable</td>
</tr>
<tr>
<td>3. Costing</td>
<td>Compare Bill of Materials Cost to warehouse cost</td>
<td>Investigate and correct inconsistencies</td>
<td></td>
</tr>
<tr>
<td>4. Parts without Structures</td>
<td>Check that there are no stock codes that should belong to structures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Bill of Materials considerations
You are in the business of manufacturing bicycles amongst other products. In our business, the Bicycle is a standard product that you make to stock based on a forecast. In the previous exercise, you added the finished stock code of the bicycle as well as some of the stock items you use in the manufacture of the Bicycle.

In addition to the static information you need to tell the system:

1. Where our manufacturing processes is performed.
2. Who or what performs these processes.
3. How much it costs to perform these operations.
4. What you use as a capacity measurement.
5. What you consider our productive unit to be.

This is where the cost center, work center, machines and employee information comes in.

For the moment you will only be looking at internal operations.

Integration to other solutions
Bill of Materials is dependent on Inventory as it requires stock code details. It also integrates with the following solutions:

- **Inventory**
  The part category and whether a stock item is defined as being a batch bill, determines what information needs be added in the Structure and Routings program.

- **Work in Progress**
  During job creation for a parent item, the Bill of Materials structure and routing is used to generate expected costs, lead time, and component and operation allocations for the jobs.

- **Requirements Planning**
  The Requirements Planning Calculation uses Bill of Materials routing to determine quantities and dates for suggested jobs and purchase orders.

- **SYSPRO Factory Scheduling**
  SYSPRO Factory Scheduling imports work center, machine, tool set and structure and routing details in order to schedule jobs.

- **Quotations**
  The Cost/Lead Time Roll-up function permits processing of Bill of Materials routings to develop costing and pricing for quotes.

- **Sales Orders**
  Single level Bill of Materials for a kit type parent product can be used in Sales Order entry.

Module dependencies

**Essential**
- Inventory

**Recommended**
- Quotations
- Sales Orders
- Work in Progress
- Requirements Planning
• SYSPRO Factory Scheduling
What is Work in Progress?

Work in Progress (WIP) is goods in various stages of completion throughout the plant, including all material from raw material that has been released for initial processing, up to completely processed material awaiting final inspection and acceptance as finished goods inventory.

Within SYSPRO, Work in Progress is used to track the activity of the manufacturing process and manage the performance of the shop floor in order to minimize job costs, utilize production resources efficiently and provide comparative reporting.

Jobs are created with or without material and labor allocations. The job start and completion dates, as well as when material should be ordered, are based on a job's operations. The system uses both material and labor allocations to calculate the expected cost of a job.

When you start posting material and labor to jobs, actual costs are recorded against the job. You can access the Work in Progress Query and print various reports to view the differences between expected and actual costs.

Process flow

Jobs are created for stocked items (with a bill of materials), stocked items without a bill of materials or non-stocked items. After ensuring that all the material needed is in stock, or purchase orders are created to meet the material requirements, the jobs are confirmed.

Floor stock items are issued and the rest of the materials as per allocations. The items are manufactured and the labor gets allocated against the jobs. The job is now complete. The Work in Progress value is zeroized and the job is closed.

Variance reporting is produced between estimated costs and actual costs of each job.
**SYSPRO Work in Progress solution**

The Work in Progress system enables you to post material usage and labor in real time and in batch mode. It also enables variance reporting to be produced between estimated costs and actual costs of each job. Work orders may be added for stocked items (with a bill of materials) stocked items without a bill of materials or non-stocked items.

These work orders can create a bill of jobs for all relevant sub-assemblies down the BOM chain. Labor transactions can be posted through kit issues, manually or imported into the system from a data collection interface. Material allocations can be issued to a job through kit issues or manually and optionally allow for the substitution of a material allocation when performing kit issues.

**Integration to other solutions**

- **Inventory**
  
  Stock items are issued as material to jobs and job parent items are typically receipted back into stock.
• **Accounts Payable**
For stocked items, the supplier assigned to the item is used to create a purchase order in Trial Kitting when a summary list of components is generated for the job or a standard part.

In the A/P Invoice Posting program when posting the G/L Distribution you are able to post invoices for non-stocked items directly to a job.

• **Cash Book**
In the Deposits & Withdrawals program you are able to post payments for non-stocked items directly to a job.

• **General Ledger**
If Work in Progress is integrated to General Ledger then the job material issues, job stock receipts, labor posting and part-billings transactions are posted to the General Ledger.

• **Purchase Orders**
During, Trial Kitting, purchase orders can be created for job components. Also, within the Purchase Order Entry program, purchase order lines can be linked to jobs.

• **Sales Orders**
Within the Sales Order Entry and Backorder Review programs, you can link a sales order line to a job. When the job parent is receipted it updates the sales order line with the quantity.

• **Lot Traceability**
Lot Traceable items are used when allocating material or creating a parent item in the Job Creation and Maintenance program.

• **Bill of Materials**
Used when creating a job in the Job Creation and Maintenance program for a stocked item with a bill of material.

• **Quotations**
During quotation confirmation, jobs can be created to supply the order for the non-stocked items.

• **Product Configurator**
In the Job Creation and Maintenance program you are able to create a job for a configured product via the Product Configurator Wizard.

• **Projects and Contracts**
In the Job Creation and Maintenance program you are able to create a job for a non-stocked item and select to track costs to the hierarchy.

• **Requirements Planning**
Jobs provide input to material supply and demand, as well as operation allocation calculations within Requirements Planning, which, in turn, recommends suggested jobs to meet calculated demand.

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**Module dependencies**

**Essential**
- Inventory

**Recommended**
- Accounts Payable
- Cash Book
- General Ledger
- Purchase Orders
- Sales Orders
- Lot Traceability
- Bill of Materials
- Quotations

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- Product Configurator
- Projects and Contracts
- Requirements Planning
What is Quotations?

A quotation (or bid) is a statement of price, terms of sales, and description of goods or services offered by a supplier to a prospective purchaser. When given in response to a query, it is usually considered an offer to sell.

SYSPRO's quotation system provides the flexibility of producing quotes with multiple offers for stocked and/or customized (estimated) items for existing or prospective customers.

When a quotation is accepted the system can created the necessary sales order, jobs and purchase orders.

Process flow

The quotation business process flow begins with a request for a quotation from a customer or potential customer. The salesperson who receives this request generates a quotation, and the quotation is confirmed. This is followed by the generation of a sales order. The planner, who is responsible for managing the inventory levels, uses the sales order to plan the manufacture of any made-in items. An estimate is performed, which is made available for the customer.
**SYSPRO Quotations solution**

The Quotations system enables the entry and maintenance of quotations, the printing of free-format quotations and, upon confirmation of the quote by the client, the confirmation of the details into Work in Progress, Sales Orders and Purchase Orders.

The Quotations module generates quotes, which emulate sales orders, with up to five quotation quantities per line.

Prices are calculated through price mark-ups based on a percentage of individual labor/material costs, and/or using a specified rate indicator for labor and/or using an entered price for material. In addition three global markup percentages can be entered all labor, material and the total.

When the quotation is accepted, it can be used to record a sales order and, where necessary, a chain of master and sub-jobs to support it. Purchase requisitions and purchase orders can be created for special bought-out items or when shortages exist for bought-out items anywhere in the sales order/job chain.

Besides using the Quotations module for quoting, SYSPRO has a simplified quoting system that can be used within Sales Order Entry, called Quick Entry. You use the Quick Entry function to enter quotes in a rapid and effective manner without having to enter all the details associated with the entry of a normal order. It is ideally suited to a telesales environment, where speed of entry is important and the facility to enter a quote rather than an order is vital.
The quote can be stored for retrieval at a later stage and then converted into an order for a specific customer.

**Integration to other solutions**
Quotations cannot run standalone and integrates with the following modules:

- **Accounts Receivable:**
  Quotations are linked to Customer information stored in Accounts Receivable.

- **Inventory:**
  Inventory stock code information can be linked to stocked lines on a quotations.

- **Sales Orders:**
  When confirming a quotation, you can optionally create sales orders.

- **Purchase Orders:**
  When confirming a quotation, you can optionally purchase orders.

- **Product Configurator:**
  You can use the product configurator to create a stock or non-stock item for quotation.

- **Bill of Materials:**
  Operations and components are linked to estimates.

- **Work in Progress:**
  When confirming a quotation you can optionally create jobs.

- **Requirements Planning:**
  Demand from quotations can optionally be included in the Requirements Planning calculation if the probability factor on the quotation is greater than the value entered in the Requirements Planning Setup.
Module dependencies

Essential
- None

Recommended
- Accounts Receivable
- Inventory
- Purchase Orders
- Sales Orders
- Work in Progress
What is Requirements Planning?

Manufacturing creates wealth by adding value to goods. To improve productivity and wealth, a company must first design efficient and effective systems for manufacturing. It must then manage these systems to make the best use of labor, capital, and material. One of the most effective ways of doing this is through the planning and control of the flow of materials into, through, and out of manufacturing.

There are three elements to a material flow system: supply, manufacturing planning and control, and physical distribution. They are connected and what happens in one system affects the others.

Traditionally, there are conflicts in the objectives of a company and in the objectives of marketing, finance, and production. The role of materials management is to balance these conflicting objectives by coordinating the flow of materials so customer service is maintained and the resources of the company are properly used.

Manufacturing companies are in the business of converting raw materials into a form that is of more value and use to the consumer than the original raw materials. Logs are converted into tables and chairs, iron ore into steel, and steel into cars and refrigerators. This conversion process, called manufacturing or production, makes a society wealthier and creates a better standard of living.

To get the most value out of our resources, you must design production processes that make products most efficiently. Once the processes exist, you need to manage their operation so they produce goods most economically.

Managing the operation means planning for and controlling the resources used in the process: labor, capital, and material. All are important, but the major way in which management plans and controls is through the flow of materials. The flow of materials controls the performance of the process. If the right materials in the right quantities are not available at the right time, the process cannot produce what it should. Labor and machinery will be poorly utilized. The profitability, and even the existence, of the company will be threatened.

Materials management is a coordinating function responsible for planning and controlling materials flow. Its objectives are to:
- Maximize the use of the firm's resources
- Provide the required level of customer service.

Reducing cost contributes directly to profit. Increasing sales increases direct costs of labor and materials so profit does not increase directly. Materials management can reduce costs by being sure that the right materials are in the right place at the right time and the resources of the company are properly used. (See Reference - ‘Introduction to Materials Management’ in About This Course section)

There are several ways of classifying this flow of material. A very useful classification is manufacturing planning and control.

‘Manufacturing planning and control is responsible for the planning and control of the flow of materials through the manufacturing process. The primary activities carried out are as follows:

**Production Planning**

Production must be able to meet the demand of the marketplace. Finding the most productive way of doing so is the responsibility of production planning. It must establish correct priorities (what is needed and when) and make certain that capacity is available to meet those priorities. It will involve:
- Forecasting
- Master planning
- Material requirements planning
- Capacity planning

**Implementation and control**
Implementation and control are responsible for putting into action and achieving the plans made by production planning. These responsibilities are accomplished through production activity control (often called shop floor control) and purchasing.

**Inventory management**

Inventories are materials and supplies carried on hand either for sale or to provide material or supplies to the production process. They are part of the planning process and provide a buffer against the differences in demand rates and production rates.

Production planning, implementation, control, and inventory management work together. Inventories in manufacturing are used to support production or are the result of production. Only if items are purchased and resold without further processing can inventory management operate separately from production planning and control. Even then, it cannot operate apart from purchasing. (See Reference - 'Introduction to Materials Management' in About This Course section)

**Process flow**

'Manufacturing is complex. Some firms make a few different products, while others make many products. However, each uses a variety of processes, machinery, equipment, labor skills, and material. To be profitable, a firm must organize all these factors to make the right goods at the right time at top quality and do so as economically as possible. It is a complex problem, and it is essential to have a good planning and control system.

A good planning system must answer four questions:

- What are we going to make?
- What does it take to make it?
- What do we have?
- What do we need?

These are questions of priority and capacity.' (See Reference - ‘Introduction to Materials Management’ in About This Course section)

Priority-capacity relationship – (See Reference – ‘Introduction to Materials Management’ in About This Course section)

‘Priority relates to what products are needed, how many are needed, and when they are needed. The marketplace establishes the priorities. Manufacturing is responsible for devising plans to satisfy the market demand if possible.
Capacity is the capability of manufacturing to produce goods and services. Eventually it depends on the resources of the company – the machinery, labor, and financial resources, and the availability of material from suppliers. In the short run, capacity is the quantity of work that labor and equipment can perform in a given period.

There are five major levels in the manufacturing planning and control system:

- Strategic business plan
- Production plan (sales and operations plan)
- Master production schedule
- Material requirements plan
- Purchasing and production activity control.

Each level varies in purpose, time span, and level of detail (See Reference - ‘Introduction to Materials Management’ in About This Course section).

**SYSPRO Requirements Planning solution**

The Requirements Planning system (with its online MPS and Job, Purchase Order, and Supply Chain Review programs) enables straightforward conversions of the suggestions from the Requirements Calculation results, to live data. It is a bucketless system which provides the facilities to run ‘what-if’ scenarios. Variable planning intervals and user-defined planning horizons offer further flexibility.

Dynamic capacity profiling, load leveling and single-level forward finite scheduling enable you to assess the impact of suggested jobs on your existing capacity loads.

**Integration to other solutions**

Requirements Planning depends on the Inventory solution. The other solutions-Purchase Orders, Sales Orders, Bill of Materials, Quotations and Work in Progress- integrate to Requirements Planning, representing either a supply of inventory or a demand for inventory.

The Requirements Planning module integrates to the following SYSPRO modules:

- **Inventory**: Requirements Planning is dependent on the Inventory module, as it balances supply with the demand for stocked and non-stocked items. Inventory order policies, safety stocks, minimum and maximum levels and gross requirements rules are all integral to the Requirements Planning calculations.
- **Purchase Orders**: Purchase Orders are used by the Requirements Planning module in the calculation of suggested supply.
- **Sales Orders**: Sales Orders are used by the Requirements Planning module in the calculation of net demand. Supply Chain Transfer orders are used to calculate both demand and supply (for the source and target warehouses, respectively)
- **Bill of Materials**: Bill of materials are used to determine which components are needed to manufacture a parent part as well as the lead times for the components and parent.
- **Quotations**: Quotations with a certain probability will be included during the MRP calculation, and they will generate a demand.
- **Work in Progress**: Job parent parts are used by the Requirements Planning module in the calculation of supply, while material allocations are used in the calculation of demand. In addition, job operations are used in the calculations of capacity requirements and start/delivery dates.
- **Inventory Forecasting**: Forecasts confirmed in the Inventory Forecasting module become the approved forecast for the Requirements Planning demand calculations.
- **Inventory Families and Groupings**: The approved forecast from Forecasting becomes the current forecast in Requirements Planning. Please note that any changes made to the forecast within Requirements Planning do not also change the forecast within the Forecasting module. Changes should rather be made in Forecasting and the changes written to Requirements Planning through the approval process.

**Module dependencies**

**Essential**
- Inventory

**Recommended**
- Inventory Forecasting
- Inventory Families and Groupings
- Sales Orders
- Purchase Orders
- Work in Progress
Conclusion
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You have now completed the SYSPRO Solutions I training guide. Below is a recap of what you covered:

- **Financial**: You gained information around the SYSPRO Core Financial solutions being:
  - Accounts Payable
  - Accounts Receivable
  - Cash Book
  - General Ledger
- **Distribution**: You gained information around the SYSPRO Core Distribution solutions being:
  - Inventory
  - Purchase Orders
  - GRN Suspense
  - Goods in Transit
  - Sales Orders
  - Sales Analysis
- **Manufacturing**: You gained information around the SYSPRO Core Manufacturing solutions being:
  - Bill of Materials
  - Work in Progress
  - Quotations
  - Requirements Planning

You learnt about the solution, the process flow, what the SYSPRO solution offers, positioning within SYSPRO and integration to other solutions.

**Related topics**
To enhance your knowledge about SYSPRO, we recommend that you review the following additional topics:
- SYSPRO Solutions II
- Introduction to SYSPRO
- SYSPRO Business Processes I
- SYSPRO Business Processes II

**Certification**
SYSPRO provides a number of additional resources to improve your product knowledge. This guide in conjunction with Reference Guides, Tutorials and AT&T Connect recordings are the tools you require for the solution-related certification exam. Please refer to your local office for more information.

**Support Zone**
It is essential that you make use of the SYSPRO Support Zone to keep up-to-date on information about SYSPRO. The Support Zone provides you with updated information on enhancements, new products and training information. In addition, there are tutorials, frequently asked questions (FAQs) and case studies, which provide useful technical information.

**Comment Sheet**
Please send us your comments to help improve the standard of the workbooks. All emails can be sent to education.hub@syspro.com.