

# SYSPRO ERP

MANUFACTURING SOFTWARE REVIEW BY SHELDON NEEDLE



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## Executive Summary

SYSPRO, now on version 8, is fully integrated business software (ERP) solution that provides complete control over the planning and management of including accounting, operations, manufacturing and distribution in a variety of industries.

Over 15,000 licensed companies in over 60 countries use SYSPRO. With one of the highest customer retention rates in the industry SYSPRO clearly differentiates itself by offering elevated service levels and a personal one-to-one relationship with its customers. All of the core ERP applications are developed by SYSPRO but there are some applications, like HR and a Configurator, which require a third party solution.

SYSPRO specializes in delivering software specifically for manufacturing and distribution businesses. Every component of the business including financials, sales, CRM, inventory, operations and the supply chain is controlled through SYSPRO. This clear business focus as well as differential functionality delivered around four Super Vertical industries; Food, Medical Devices, Machinery and Equipment and Electronics.

SYSPRO also has customers in other industries, including pharmaceutical, furniture, high tech, metal fabrication, software, aerospace, injection molding, plastics, automotive and assembly of components, parts and finished goods.

Built on the latest Microsoft .NET technology SYSPRO encompasses all aspects of the enterprise including ERP, Supply Chain Management, Manufacturing, CRM, Warehouse Management, E-commerce, Advanced Planning and Scheduling and Business Analytics.

SYSPRO inventory supports multi-warehouse and multi-bin environments with costing defined per warehouse. In-transit tracking is available for both inter-warehouse transfers, as well as imported goods. SYSPRO offers superior lot and serial tracking functionality providing bidirectional traceability up and down the supply chain.

SYSPRO enables 24 / 7 inventory and order visibility, total order fulfillment and overall improved customer

service throughout the enterprise. Flexible pricing options are available including contract, tiered, discounted and cost-plus pricing options. Promotional pricing is available for companies supplying consumer goods, with the optional need to track deductions/chargebacks. Pricing is defined per customer and extends to the web and e-commerce offerings.

The SYSPRO Inventory Optimization suite assists in producing accurate forecasts, enables forecasting at a group or family level and helps optimize inventory levels using a sophisticated modeling tool to identify how to gain additional profit from inventory while reducing inventory holding, achieving the desired service levels and improving cash flow.

SYSPRO addresses all aspects of the manufacturing spectrum including job shops, make to order, make to stock and repetitive environments. This diverse functionality has made it extremely well suited for the needs of "mixed mode" (hybrid) manufacturers who may build to unique customer specification but at the same time repetitively makes to stock based on forecasted demand. In addition, this quickly implemented system is also well suited to the make to order environment where product is made from a standard Bill of Materials at the time of order, "quick turn shops" with short production runs, as well as companies outsourcing much of their production.

SYSPRO also offers an excellent fit for batch process and blend to order manufacturers such as chemical, food and pharmaceutical production. SYSPRO software is targeted at the small to midsized manufacturer and distributor with heavy transaction volumes as well as larger international companies requiring multi-company, multi-site and multi-warehouse functionality. It is a very scalable solution that allows companies to grow into the software as needed. For example, SYSPRO software is sold by the application or module. This means that companies interested in a system are not forced into purchasing the entire line of SYSPRO modules but can pick and choose from more than 50 available. As a result, if only "light" manufacturing needs exist, a selection of only those modules important to the requirements at hand can be made.



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# SYSPRO's Cloud ERP Solutions

Hosting your ERP system in the cloud allows you to benefit from the full functionality that ERP Software has to offer without having to purchase and maintain the entire IT infrastructure. You simply pay a regular subscription for the use of the system.

## You would consider a SYSPRO cloud option if you:

- Are concerned about the impact on cash flow (capital outlay needed to start an on-premise ERP project)
- Want the option of subscription pricing for an ERP application
- Don't want to acquire and maintain your own infrastructure or manage internal ERP support staff
- Want to consolidate multiple site operations without the concern and risk of setting up your own central site
- Need to scale usage up or down without having to stop to upgrade the underlying infrastructure
- Want to have control over when you receive software upgrades

## There are several cloud solutions to suit your specific requirements:

**SYSPRO BusinessLive - SaaS** (Software-as-a-Service)  
**SYSPRO BusinessLive** is a monthly subscriptions based option that provides the full SYSPRO ERP solution, delivered via the cloud.

**Managed Services – IaaS** (Infrastructure-as-a-Service)  
This is a rental option on only the hardware, i.e. you would be responsible for the purchase, licensing and maintenance of the software.

**Azure** - The Microsoft Cloud Platform  
This is a Cloud hosting agreement with Microsoft. To see more about this option please visit the Microsoft Azure Website.

# Implementation

The key to a successful ERP implementation is the effective realization of the company's strategy and business processes through the ERP functionality set. Simply put: the implemented system must correspond with and enable the business processes in your organization.

Your company's uniqueness is its competitive edge. Therefore the best solution is a blend of tried and tested ERP, integrated with your uniquely engineered business processes, creating a unique process model for your organization.

**SYSPRO Process Modeling (SPM):** assists throughout the implementation phase by providing pre-configured process patterns which an organization can use as a basis to develop its unique process requirements. It provides a framework that supports management in aligning IT with company strategy and business objectives, as well as enabling a transparent view of the company's specific modeled processes and organizational roles. During the modeling workshops, business processes are enriched with business system specifics (e.g. business rules). Finally SPM produces a fully documented blueprint of the business.

**SYSPRO Workflow Services (SWS):** SYSPRO Workflow Services is based on the Microsoft Windows Workflow Foundation and provides a workflow engine that is built into the SYSPRO product. It provides the capability of designing and visualizing the workflow processes modeled on an organization's business processes.

**Role Based Security:** The function of managing all aspects of security associated with a Business Process is greatly enhanced and simplified through defining security at role level and assigning an operator to a role.

## Business Alerts/Event Management

SYSPRO Office Automation offers a number of ways for proactive management by exception. Predefined trigger points can call outside programs at specific points in SYSPRO, which enables customization without altering the source code. For example, a program can be called when a line item is entered in sales order entry. In addition, certain events have been predefined to call external programs, reports and e-mails to automatically notify operators and can be initiated when certain conditions have occurred or when specific processes are completed. SYSPRO Electronic Signature functionality allows the same alert options based on user-defined conditions. Additionally, the user interface allows reports and metrics to be refreshed and to raise alerts as specified by the user.

## Technology Foundation

SYSPRO continues to pursue a long-term strategy of delivering cutting-edge enterprise software and unlocking value through providing the latest technology foundation to its customers. SYSPRO's pragmatic approach to development allows customers to leverage innovative technology for maximum results.

## Microsoft .NET

SYSPRO leverages Microsoft .NET framework to deliver SYSPRO e.net solutions, an open component-based software framework that enables an SOA strategy. SYSPRO e.net solutions provides a highly cost-effective way for SYSPRO customers to integrate applications, trade across the Internet, maximize business-to-business trading and leverage wireless connectivity. The framework can be utilized to give authorized individuals the ability to interact with SYSPRO software data over the web and from remote devices, including pocket PCs and cell phones using WAP technology. It provides a structured way of directly accessing the business functionality within SYSPRO software while maintaining the software's built-in business rules and security. In addition to enabling important business functions such as remote purchase order entry and inventory status determination, SYSPRO e.net solutions

also facilitates the integration of select best-of-breed applications with the SYSPRO best-of-breed enterprise solution.

## Workflow Service Host

SYSPRO Workflow Services uses key functionality from the .NET Framework 4.0, such as Microsoft Workflow Foundation (WF) and Microsoft Windows Communication Foundation (WCF), and communications with various applications via SOAP and HTTP, facilitating rules-based control over business process.

## XAML Presentation Controls

The XAML Presentation Controls, working off a Windows Presentation Foundation, significantly extends the client experience. They reduce complexity and allow for extended customization by making it quicker and easier to deploy changes to the way data is represented.

## .NET User Controls

User controls written using any .NET language can be integrated directly into any customized pane within SYSPRO. This provides greater accessibility and visibility of information from any application.

## User Interface

The purpose of the SYSPRO user interface is to allow the user complete freedom to visualize any required information within SYSPRO in any application and to make this process accessible to the end-user so that development skills are no longer required. There is no restriction on how the information is derived, or on the technology used to present that information. Users can draw on out-of-the box templates to build user applications at the touch of a button and also create brand new applications written in any .NET language that can be implemented into the core SYSPRO product. An unlimited number of custom fields can be added to the system and can be placed anywhere on the screen with optional built-in logic to extend a company's business

processes and rules. The customization changes are implemented to prevent or minimize user disruption when upgrading.

## Database

SYSPRO provides a choice of data storage in the form of a Microsoft SQL Server database or a C-ISAM database, without compromising functionality. This is achieved through the use of business objects that control the flow of data, security and business rules, between the SYSPRO programs and the data. The Microsoft SQL Server database option provides premier RDBMS power. It ensures true scalability and data integrity.

## Data Accessibility and ODBC

Software Developer Library: SYSPRO provides an extensive library of business objects that provides a complete interface to SYSPRO business functionality to facilitate development around the SYSPRO product. The business objects provide access to SYSPRO data within the confines of the SYSPRO business logic and without jeopardizing the integrity of the data. Developers can use the language of choice to develop around the core application, using any language that can interface to COM. Languages include all the Microsoft Visual Studio Applications, including Visual Basic .NET, C#, C++ and Visual Basic, Visual Basic for Applications (VBA), VBScript, Jscript and COBOL among others.

## Document Flow Manager

An integrated Document Flow Manager is available to facilitate collaborative commerce and disparate system communication and interoperability. The Document Flow Manager allows XML-based inbound and outbound documents to be seamlessly processed into and out of the SYSPRO system. The Document Flow Manager utilizes .NET and SYSPRO e.net solutions COM objects to instantly process XML embedded documents received in pre-defined queues. Transactions can also be processed through e-mail by attaching XML documents that are rendered using XML Style Sheets. The pre-set Microsoft Exchange e-mail in-boxes are constantly interrogated for new transactions. Outbound transactions can also be sent using this transport mechanism.

## MS Office Integration

SYSPRO comes standard with integration to Microsoft Office using Web Services. SYSPRO data can be accessed from within Word and Excel without requiring SYSPRO software or knowledge. SYSPRO Office Integration (SOI) is an Office Business Application (OBA) that provides collaboration capabilities with customers and suppliers who could securely access relevant data from SYSPRO. For example, suppliers could check stock levels when automatically alerted that minimum stock levels have been reached. Documents can optionally be printed using a Word format and SYSPRO enables the General Ledger statements to be output directly into Microsoft Excel. Data viewed in queries, such as a customer's invoices, can be automatically sent to Excel via OLE or created as an HTML document.

## Client/Server

Client/Server is the primary communication protocol used by SYSPRO clients to connect to the SYSPRO application server. SYSPRO offers a hosted as well as on-premise solution. The hosted solution requires Citrix or Terminal Services.

## Language Translation

SYSPRO is available in English, Spanish, French, German and Simplified Chinese. Users may choose to create their own dictionaries should a different language be required. Additionally, SYSPRO provides tools for words or phrases that need to be translated or customized. For example, "supplier" could be translated to "vendor," or "bill of material" could be translated to "recipe" or "formula." This translation will appear throughout the system, including on the screen, in reports and in system generated messages. This method of translation is version-independent and will be retained as updates or new versions are applied.

## Extensible Markup Language (XML)

In line with SYSPRO's adoption of .NET and the XML standard, the SYSPRO Report Writer and Financial Report Writer both produce reports and documents in XML format for browser-based Intranet or Extranet publication or electronic data interchange. Financial report statements feature full drill-down functionality to the original source document in an XML rendered environment. Sales and purchase orders (PO's) can also be produced in XML format, which facilitates electronic trading with partners. All reports and documents can be archived in XML for on-demand retrieval at any point-in-time.

## Mobile Solution

IN 2012 SYSPRO announced SYSPRO Espresso mobile platform for mid-sized manufacturing and distribution companies. The new mobile solution is purpose built and leverages leading edge HTML 5, Microsoft technology and tools.

"SYSPRO Espresso is targeted at executives who require immediate access to c-level information as well as all users that are not office bound and who require secure access to real time data. The SYSPRO Espresso architecture is one of the first platforms of its kind to use a single source codebase (for the business logic) to create native applications for any mobile device, with built-in powerful customization capabilities both for the end-user and for developers to engage.

## Support & Training

**SYSPRO offers a variety of training and support options performed by qualified SYSPRO experts, including:**

- The SYSPRO Learning Channel, which provides 24/7 self-paced online training
- Customized on-site training/consulting
- Remote support and training
- Telephone assistance

- Classroom instruction

## Enterprise Performance Management

Business users whose organizations have implemented ERP systems know that the data needed to run the business is stored in the system, but have often found it difficult to access and use the data for making decisions. Enterprise Performance Management (EPM) solutions allow business users to carry out the planning, monitoring and analysis functions that they need to ensure Key Performance Indicators (KPI's) and performance goals can be achieved.

**Executive Dashboards:** SYSPRO Executive Dashboards provide a number of pre-defined dashboards that allow executives an immediate view of their business processes. Additional dashboards can be created or panes added to an existing dashboard through a simple select-and-drop mechanism. SYSPRO Executive Dashboards is an interactive visual analysis solution that provides executives with business process management and what-if analysis tools.

**Cashflow Forecasting:** SYSPRO's Cash Flow Forecast facility allows managers to view the company's projected cash position into the future by applying outstanding cash requirements, payment projections and other cash projections to the current bank balances.

**Business Intelligence:** SYSPRO Analytics provides easy access to decision-making information. SYSPRO Analytics comes standard with a set of cubes and basic Key Performance Indicators (KPI) designed to form a foundation on which a company can build their specific metrics. With SYSPRO Analytics, a company can drill down into existing data to discern patterns and develop reports that reflect each user's specific information needs.

## Customer Relationship Management

SYSPRO includes a Contact Management system that is seamlessly integrated with Microsoft Office, including Outlook, using the very latest technologies. SYSPRO

also offers a fully-functional, integrated front-office CRM/SRM offering that focuses on managing and optimizing all aspects of the relationships that exist within a dynamic enterprise. CRM incorporates enterprise-wide contact management, a calendar, to-do and appointment management, sales and sales pipeline management and analysis, market campaign management and other full service and support functionality including warranty control and service contracts. CRM is a single module that seamlessly integrates back office accounting and ERP functionality to create a 360° view of all critical customer and supplier relationships.

## SOA Enabled Solution

Organizations across the world are increasingly embracing SOA (Service Oriented Architecture), facing its challenges and taking advantage of its benefits, with growing evidence that investments in SOA are paid back in the short- to mid-term through business agility. The functionality of SYSPRO's core application is designed on a service-oriented model, and our software is built using SOA enabling technologies.

SYSPRO e.net solutions: Based on Microsoft's .NET architecture and XML (extensible markup language) standard, SYSPRO e.net solutions is a component-based architecture that is designed to provide a cost-effective way for SYSPRO customers to integrate best-of-breed applications, maximize business-to-business trading and leverage wireless connectivity. SYSPRO e.net solutions provide extremely flexible functionality and a fluid development environment. The functionality of the core SYSPRO solution can be enhanced to match company requirements that present themselves in dynamic business environments. As a result of SYSPRO e.net solutions, functionality is extended to any browser or messaging environment, including wireless notebooks, PDAs, Tablet PCs and SMS devices (such as smart phones), as well as disparate systems. SYSPRO also incorporates a collaborative commerce engine, called the Document Flow Manager, which further enhances system interoperability.

## Document Flow Manager

The functional and powerful Document Flow Manager is a component of SYSPRO e.net solutions. This

connectivity tool allows a business to automate processes, integrate enterprise applications and bring customers "into the enterprise." The Document Flow Manager forms the foundation for extending the enterprise outside traditional business parameters and delivering (and receiving) required information into (and from) the hands of customers, suppliers and external disparate systems.

## E-Commerce

SYSPRO software was one of the first solutions to be positioned as an e-commerce enabler. Companies moving more aggressively toward e-commerce and other Internet-based supply chain strategies will find SYSPRO software to be a good choice. SYSPRO also provides a series of out-of-the box Microsoft .NET Web-based applications, which enable Internet-based collaborative e-commerce. Inventory status can be queried, pricing confirmed, orders placed and the status of existing orders viewed through a Web browser. Customers can view their current account balances, salespeople can enter their orders for the day from the road and executives can monitor the health of the company by viewing key metrics through extensive out-of-the-box Executive Dashboards.

## Role-Based Fluid Interface

SYSPRO is highly configurable and flexible and subscribes to the concept of a fluid, role-based interface. Every module is controlled by a set of options that streamline SYSPRO to match a company's specific business requirements.

Menus can be personalized by role or operator to include SYSPRO applications, reports and external applications. SYSPRO uses the phrase "Fluid Design" to describe the user interface because it is designed to be simple and easy to customize. The layout of each application or module can be customized by easily repositioning, adding or removing fields or an entire window. This customization can be performed at role level by the administrator to ensure that all users with a specific role are using the same interface. VBScripts can be associated with any field on the screen to enforce or

extend business rules or perform an external function. Custom .NET applications can be seamlessly embedded into the core SYSPRO product. Hyperlinks and quick links can be associated with key data for easy access to relevant information.

## Security

SYSPRO offers comprehensive security throughout the system. SYSPRO allows users to configure these security options and all customization of the user interface at role level. A centralized administration application manages all the security and a centralized tool manages all the user interface changes. Multiple levels of security are offered in various formats, ranging from simple security options to the extensive requirements specified by regulatory bodies such as the FDA or Sarbanes Oxley.

### Some additional security features embedded in the SYSPRO software are:

- Encrypted passwords can be used for companies, operators and various functions
- Access to module and functions within each module can be controlled at the group or role level
- Access to fields and activities can be controlled at the operator or role level
- Electronic Signatures can be used to authenticate an operator and/or trigger e-mail notification of an occurring event and/or trigger another application as a result of an occurring event. E-signatures can be defined at the company, role, group or operator level
- By customizing the application at the “role” level, the administrator has total control of what users can see or access
- Every action can be recorded for auditing purposes, including changes to static information, setup options or security settings.

## Features & Functionality

SYSPRO comes standard with an intuitive Explorer style menu that can easily be customized or personalized. Every module is controlled by a series of options to better suit the user’s environment. SYSPRO provides powerful queries by module with drill-down capabilities. Hyperlinks, quick-views and custom VBScripts can be added to further extend functionality. Custom panes can be added to create user-defined executive views and generate real-time alerts.

## Inventory Control

SYSPRO offers extensive, flexible inventory controls that satisfy the requirements of most manufacturers and distributors. A particular strength of SYSPRO Inventory Control is its multi-warehouse capabilities, where the warehouse could be virtual or real. Different costing methods can be specified by warehouse allowing, for example, purchasing to operate on an average cost and manufacturing to operate on a standard cost basis. Costing methods supported are Average, Standard, Last, LIFO, FIFO and Actual.

Inventory transfers from multiple locations and unlimited bins per item per location are supported. Inventory can be transferred between locations immediately or tracked in transit. Supply Chain Transfers (SCT) can also be generated to schedule transfers between locations, with the option of adding associated costs.

The inventory part number can be up to 30 characters long and can be cross-referenced with both customer and vendor part numbers. The part number can optionally be automatically generated based on user-defined VBScripting or based on predetermined characteristics specified in the rules-based Product Configurator module.

SYSPRO offers multiple units of measure per item, enabling purchasing, selling, manufacturing and costing in different units of measure. Replenishment rules and related parameters for purchasing or manufacturing can be specified at the stock code level or at the stock code/warehouse level. SYSPRO has real accounting strength, allowing users to designate separate General Ledger codes for each type of transaction and

warehouse/location. The user can specify whether to assign account numbers at the warehouse level only, or at the warehouse/product class level.

The Inventory Control module includes a comprehensive Physical/Cycle Count system. Part numbers can be selected for counting by location (warehouse and/or bin), ranges of items, ABC category, cycle number and even by ranges of vendors. SYSPRO can print tickets (by bin, by part), labels or lists for counting. Several variance reports are available, as well as the ability to confirm or cancel the count. SYSPRO creates a transaction for the relevant adjustments and generates a posting to the General Ledger.

The inventory backflushing feature is designed for the quick turn shop with short production runs. Backflushing allows the receipt of a finished item into inventory while automatically relieving inventory of all subassemblies and raw materials used in the production of those finished items. All of this is done at BOM cost and is completed without the necessity of creating work orders. The system provides facilities for both single and multilevel backflushing. The system also generates the proper labor postings for the operations necessary to manufacture the remaining quantity required of the subassembly if desired (at BOM).

SYSPRO Warehouse Management provides the infrastructure required for bin level warehouse management with the ability to define bin dimensions and group bins by primary function. Integrated with all inventory related transactions, it will suggest putaways, palletization and replenishments. Directed picking with bin sequencing of pick notes are provided.

## Inventory Optimization

SYSPRO recognizes that reducing operating costs and lowering inventory levels while improving service levels is the primary objective of today's companies looking to be more efficient and more competitive.

**To facilitate these companies in achieving their goals, SYSPRO developed the Inventory Optimization Suite, which comprises three modules:**

- Inventory Forecasting

- Inventory Families and Groupings
- Inventory Optimizer

The Forecasting module is a simple, easy-to use sales demand forecast management tool. Based on the available history and a range of algorithms, it suggests future stock replenishment, with the option of removing outliers (unusual historic variations in demand), and enables manual adjustment to the history. Manual adjustments might be needed to exclude certain demand, apply market intelligence or correct for unusual demand. A comprehensive Pareto (A, B, C) analyzer is built in, with a degree of forecast approval workflow. In addition, reports in both tabular and graphical formats provide easy reference and the ability to delve into the forecast detail. SYSPRO also provides a report to monitor forecast accuracy.

The Families and Groupings module allows companies to define "collections" against which the forecast will be established. The demand information for each item in the collection is used to determine the forecast, which is then disaggregated back down to the item level. The forecast is ultimately used by the MRP calculation in the Requirements Planning module.

The Inventory Optimizer (IO) module provides the tools and processes to optimize inventory. The IO module makes inventory parameters visible and controllable and provides modeling tools to determine the impact of changing parameters on service levels, stockholding, delivery performance and manufacturing or procurement performance.

## Lot and Serial Traceability

SYSPRO includes full multi-level, bi-directional lot and serial traceability. Each item can be designated as requiring lot and/or serial tracking. This function will assist companies seeking ISO-9000 approval. Any transaction within the system that affects a traceable item will require that a lot and/or serial number be entered.

SYSPRO allows component-to-parent tracking with multi-level traceability query capabilities. In addition, lot or serial numbers for items being manufactured, as well as components being used in the manufacturing process, can optionally be reserved at the time the work order is created. Alternately, the numbers can be

recorded as the items are received or issued. In addition, automatic lot (and bin) depletion is supported, automatically forcing the choice of lot number used in a sales or production transaction based on oldest first. When combined with the lot/serial expiration verification, the system becomes particularly well suited to the food processing industry or any company wanting to reduce waste by pulling ingredients on a FIFO basis, but also wanting to ensure those ingredients have not passed an expiration date.

## Procurement

SYSPRO offers a comprehensive Purchase Order module that includes a purchase requisitions system that monitors purchasing budgets and offers an approval process before confirmation into a purchase order or a supply chain transfer (SCT) from another warehouse/location.

SYSPRO accommodates three level chained discounting at both the line level and/or the purchase order level with the ability to revise the percentages or override with a flat amount.

A customer and customer PO number can be associated with each purchase order, and line items can be linked directly to sales orders or work orders for tracking and allocation purposes. If non-stocked items are purchased, the appropriate General Ledger account number may be specified. Unlimited comments may be entered throughout the body of the purchase order, along with predefined text that could be tied to the item.

SYSPRO allows multiple approved manufacturers to be associated with each part that can be linked to specific suppliers. Additionally, a vendor/item cross reference may be specified that allows for the identification of multiple vendors for each item, and includes the vendor item number, purchase price, last price paid and discount available. Supplier price contracts are supported. Multiple negotiated prices, minimums, quoted lead-time and start and end dates can be tracked by item by vendor.

The Blanket Purchase Orders functionality of SYSPRO enables the entry and management of contract purchase orders for specific suppliers. It creates, maintains and tracks the use of purchase orders against a supplier's contract.

Companies can take advantage of the Request for Quote (RFQ) module when contracts are due to expire or when pricing is required for raw materials that are being introduced to the organization for the first time. The RFQ module enables easy and efficient tracking of bids, automating the decision-making process for the best supplier.

Goods can be received by individual stock code or by all items on a purchase order at once, in which case the user has the option to apportion non-merchandise costs against the order. The receiving function includes a GRN (Goods Received Note) suspense system that is used during the vouchering process in Accounts Payable for matching purposes. Goods may optionally pass through an inspection process that has several status levels: Counted, Inspected, Accepted, Rejected and Returned.

Depending on how the system is configured, the receiving function addresses all issues relating to inspection, serial and/or lot tracking. Items can be received to a work order, to stock or to inspection. Subcontract operations can also be received against a work order and against a specific operation defined for that work order.

Returned goods can be tracked using the Return to Vendor module, which provides an efficient method of controlling the return and exchange of items bought from suppliers and ensures the visibility and tracking of an item until the transaction is concluded. The user is able to remove items from inventory and negotiate a return or exchange with the vendor.

While the Purchase Order module addresses landed costs in a basic fashion, the Landed Cost Tracking module addresses the sophisticated needs of importers or companies wishing to track the cost details associated with landing product into the warehouse. The user is able to create a "Bill of Landed Costs" per item per route, reflecting all anticipated costs involved in landing a shipment of goods to the warehouse. Each element has its own rate and currency code. The system will maintain customs exchange rates, tariffs, routes, shipment advisory planning (from the PO line request date) and tracking.

The user is able to assign costs from a shipment across several items from several different purchase orders.

Costs of the shipment can be equally divided among all the items on the shipment or apportioned according to the weight (mass) of each item, the volume, a flat rate or custom calculation incorporating tariff rates, exchange rates and other elements to establish a standard landed cost. When goods are received, they may be accepted into inventory using the expected landed costs if all actual costs have not yet been entered into the system. When invoices are finally received and matched to the receiving document, any difference between estimated landed cost and actual landed cost can then be identified.

## Sales Processing

The SYSPRO Sales Order module provides functionality to manage order entry through order fulfillment. There are several types of orders allowed, including a traditional two-step sales order, scheduled and forwarded orders, debit and credit memos and billings and supply chain transfers between warehouses. Dispatch notes may be used to make multiple deliveries for one line of an order, for one order, or even for one customer, and then produce one invoice for all the specified “dispatches.” SYSPRO offers an integrated and flexible EDI solution for those companies that deal electronically with their Trading Partners.

The ship-to address may be defined per order or per line item providing maximum flexibility for the customer. SYSPRO also provides the facility to optionally ship “full orders only” or automatically apply a minimum order charge if the minimum order value for that customer is not met.

SYSPRO not only allows all documents (sales order, invoice, order acknowledgment) to be user defined, but also allows 62 versions of each document that can be selected during order entry. Documents can be printed immediately or in batches, and can be automatically archived for reprinting and for auditing purposes.

SYSPRO has several methods of progressively complex and flexible pricing capabilities, with a contract pricing system that allows contracts to be defined for specified periods by customer or by buying group. If contract pricing is in effect, the system selects the lowest available price from the contracts associated with the customer/buying group. Complex pricing is also available through the Trade Promotions module that

allows pricing at user defined group levels where pricing is determined across the entire order.

SYSPRO offers a comprehensive and flexible credit checking system that will check against the customer's credit limit, credit terms or both, and will require credit authority to release the order from a suspended status. Order entry includes a customer/item cross reference that maintains each customer's/vendor's part number against each internal item, and allows the use of either number during order entry. The cross reference also maintains last price sold to the customer, the customer's retail price and profit percentage, the last invoice number and date, the quantity and unit of measure sold and any discounts given. This information is available for query during sales order line item entry and is established at the customer level, not the system level.

SYSPRO provides the ability to define sales templates per company or customer to facilitate the quick entry of orders with minimal key strokes. Recent purchases can also be used as templates for this quick entry process.

The Product Configurator is available for use in the order entry process to facilitate the ordering of items where options exist. The Product Configurator is rules-based to prevent the ordering of an invalid product.

SYSPRO Sales Order module includes a simple Load Planning feature to facilitate efficient loading of vehicles for delivery. The load can be controlled by weight or volume, and orders can be automatically or manually assigned to loads. Documentation is produced to facilitate loading the vehicles in the right sequence and presenting the route sequence for the driver.

SYSPRO also offers a Counter Sales/Point of Sales (POS) solution for the retail environment. The POS offers all the flexibility of the SYSPRO Sales Order module plus more, including the added benefits of providing off-line trading, and powerful reporting and management functionality.

Payments can be processed in real-time using the Credit Card Interface which integrates with VeriSign (PayFlow Pro), Authorize .NET and IC Verify gateways.

The Blanket Sales Orders and Releases module allows the user to establish timed, scheduled releases either manually or by accepting an EDI file from the customer.

This module was originally developed to address the requirements of the automotive industry and allows the quick recording of new release changes to the original schedule. Management can review new requests, comparing them to the base contract. The sales order is automatically altered to reflect new delivery schedules. Upon shipment, the base data will be updated for comparison with the next release, while an ASN (Advance Shipment Notice) can be sent to the OEM. A history of cumulative releases and delivery performance is part of this module.

The Trade Promotions Management module offers functionality for companies that deal with consumer goods and need to effectively manage promotions and deductions. Multiple types of promotions can be defined, including off-invoice, accrued and free or reduced-goods promotions. Deductions are recorded with customer payments and can be accepted, rejected or offset against accrued promotions during a review process. This module also offers sophisticated, complex pricing options.

The Return Merchandise Authorization (RMA) module provides flexible options for the returning and tracking of goods sold to customers. RMA allows for multiple actions when processing a return, including repairing (in or out of warranty), replacing or just processing a credit. Replacement items may be cross-shipped.

The Sales Analysis module provides several standard reports, including tax, commission, turnover and profitability reports. User-defined analysis keys can be defined for retention of sales history information.

## Manufacturing

The Bill of Materials (BOM) module in SYSPRO allows the definition of multiple routes per item. Each route comprises two parts, the structure and the routing or operations. Routes can be associated with warehouses to support different processes or even components for the same part at different locations to determine the true manufacturing standard costs per location.

When creating a BOM, components can be linked to operations, allowing the time phasing of those components to support a just-in-time inventory policy. Each component within a BOM has on and off effective dates, a scrap quantity and/or a scrap percentage and can

hold up to 60 lines of comments, which may appear on the factory documents.

A BOM can be manually created, imported from an external program such as CAD or the components and routes can be copied and modified from another part. The system allows mass replacement of a component throughout all structures on file. Components can be entered as a percentage of the finished product, which is particularly helpful for industries that produce things like food, pharmaceuticals and chemicals.

The Bill of Materials module supports by-products and offers a solution for co-products, which provides visibility and accurate cost apportionment. Multiple types of co-products can be defined for different environments, including concurrent, sequential, proportional and multi-grade, to ensure accurate costing of each item. Costing can be simple or detailed by component, operation and co-product. The module also has a product costing and "what-if" capability. The what-if function determines the effect of cost changes without disturbing the existing costs.

An Activity Based Costing feature allows overhead costs to be defined and tracked at the point they occur, rather than in the traditional manner. SYSPRO allows these costs to be tracked without affecting the BOM cost or the General Ledger.

SYSPRO has the ability to control BOM changes with the Engineering Change Control (ECC) module, which enables the recording of version and release levels for an item. This has the effect of archiving the current BOM prior to the change. Any revision/release of an item can be manufactured as required. The engineering change process is controlled by a user-defined workflow-type sub-system designed to replace the paper trail that usually accompanies changes to a product design. ECC carries through to the inventory, sales and purchasing processes.

A feature that greatly enhances the ability of SYSPRO software to satisfy engineer-to-order and job shop environments is its Quotations and Estimating module. A quotation for a custom built item can be created for an existing customer or new customer. Estimates are used to determine the price of custom items by building a BOM for the non-stocked items. Multiple quantity price breaks can be established. The user can assign a

probability rating, which measures the likelihood of winning the quotation and can be used in MRP to help determine the effect of the load on the factory's capacity should the quotation be won. On acceptance, the quote can automatically generate a sales order and related work orders, as well as create the purchase orders/requisitions required for bought out items. If rejected, SYSPRO prompts the user for a reason code for later analysis. Additionally, the estimate can be used to generate a live BOM, while retaining the original estimate for further quotes.

The Requirements Planning module comprises four separate functions: Master Production Scheduling (MPS), Rough Cut Capacity and Resource Planning, Material Requirements Planning (MRP) and a Scheduling system.

The Master Production Schedule will suggest a build schedule for MPS items based on existing demand and supply. The build schedule can be accepted or modified by the scheduler, and will then serve as the demand in the MRP run. When a work order has been completed for an item in the build schedule and it is received into stock, this will automatically reduce the outstanding build schedule quantity for that item.

The Resource Planning function allows the forecasting of requirements at a level above the usual planning of people and machines in production. A file of resources critical to the company's manufacturing operations is maintained. These resources may include materials, operations or more abstract resources such as warehouse space, forklifts or maintenance personnel. The user can construct any number of single level bills of resources (resource parents).

The MRP function is a bucketless, regenerative system. The regeneration process takes a snapshot of the system, thereby allowing users to continue to process transactions on a net change basis. The primary purpose of MRP is to create and report on time-phased material requirements to satisfy the production plan. The MRP query also provides details of the demand on each work center by period (based on infinite capacity), including pegging information, and a bar chart representation of capacity by work center.

The Scheduling system focuses on finite capacity and the ability to review and approve the suggested orders online. The suggested purchase orders and work orders can be accepted by the user and automatically converted into live orders in the system.

The Work In Progress (WIP) module provides a means of creating and maintaining work order details and tracks the progress of a work order through all the required operations until complete. It reports on WIP and work order status and creates financial transactions for WIP activity to interface with the General Ledger.

#### **A new work order or "job" can be created in the following ways:**

- Manually in the Work in Progress module
- Confirmed from within the Quotations and Estimating (custom job shop) module
- Created from within order entry for a configured item (configure to order)
- Created from the MRP system
- Created from a back ordered item from a sales order within the Sales Order module

SYSPRO allows master/sub work order relationships for reporting purposes. Sub jobs can be automatically transferred into the master upon completion.

The created work order can be designated as confirmed or non-confirmed. No transactions can be collected against the work order until it is confirmed. An existing work order can also be put on hold, preventing further transactions from being accumulated against it.

A work order can be created to manufacture a stocked or a non-stocked item. The user can designate whether the primary routing or an alternate routing should be used, and whether sequence checking is required during transaction entry for the work order. A work order can be tied to an existing customer or to no customer at all. This is useful in some of the online query functions.

Material can be issued to a work order manually, through the receipts, adjustments and issues function or automatically through the kit issues function. SYSPRO will also allow reverse kit issues. This feature is helpful when a final assembly or subassembly is broken down and some or all of the components are returned to stock. The program allows an online check of the availability

of materials before issuing them. If stock is not allowed to go negative, then only available stock will be issued. This provides good online shortage visibility.

WIP receipts can optionally go through an inspection process. From inspection, the item can be accepted into inventory, it can be scrapped, it can be received into an alternate warehouse or even received as a different part. SYSPRO offers a Bar Coding solution that can be used to record any material movement on the shop floor or in the warehouse.

Labor transactions against a work order can either be entered manually or interfaced through a special import function. Non-productive time can be entered with a reason code for later analysis. Labor entry also tracks quantity completed through each work center, and quantities scrapped with reason codes.

SYSPRO offers a shop floor data collection module, ShopClock, for real-time tracking of labor. ShopClock offers flexibility in shift setup that allows organizations to configure rules to match their shop floor policies. ShopClock provides a “window of time” view that provides management with an “up-to-the-second” view of shop floor activity.

The Factory Documentation module can generate a number of user-defined documents for use on the shop floor, such as a production traveler or job ticket. The Projects & Contracts module provides visibility over costs and profits at user-defined areas of a contract. Multiple jobs can be associated with a contract. Deposits, retentions and progress payment terms can be specified and automated.

The Quality Management System enables product quality control by allowing the configuration of multiple measurement metrics as well as inspection points per inventory item (e.g. length, chemical composition and hardness). Exceptions to inspection rules can be configured per customer, supplier, operation and work center.

## Factory Planning & Scheduling

SYSPRO provides a range of scheduling products to give companies choices around sophistication pricing. The Graphical Planning Board is a basic finite capacity scheduler with limited rules and features for automatic scheduling. The schedule can be manually manipulated using the graphical Gantt chart view.

The SYSPRO Finite Scheduler product contains more sophisticated features for factory scheduling. Multiple constraints per operation can be considered, such as machine, tools, labor and so forth. Manufacturers are able to model the factory more accurately by using features such as transfer batches, sequence dependent setup times, preferred resource selections, maximum operation spans and maximum delay between operations

The SYSPRO Advanced Scheduler product allows companies to generate high quality schedules through the use of advanced scheduling rules and by considering the availability of components and raw materials. Users can define complex scheduling rules using filters, a combination of standard and/or defined advanced rules and user defined scripts. Jobs on different BOM levels and stock on hand is pegged based on definable rules, thereby ensuring a feasible schedule.

The SYSPRO factory scheduling solutions provide for multiple manufacturing sites within a SYSPRO company. This allows for static information, such as warehouses and work centers, to be associated with a site, limiting the information exported to the schedule.

## Financial Accounting

SYSPRO financial accounting modules include: General Ledger, Accounts Receivable, Accounts Payable, Cash Book/Bank Reconciliation, Electronic Funds Transfer, Fixed Assets and Contact Management.

The General Ledger (GL) module is flexible, with the option of being real-time. It can be maintained in multiple currencies and has the ability to revalue these

currencies if needed. Each account number can be password protected to prevent access via query and to prevent entry during transaction processing. An account number can also be put on hold, which prevents additional postings.

SYSPRO accommodates general journal entries, recurring entries, the reversal of entries, allocation entries and inter-company entries. Statistical accounts can be defined and used for automatic reallocation of account values. Posting from other modules into the General Ledger can be in either detail or summary formats. Journals can optionally require authorization before being posted into the General Ledger.

SYSPRO includes flexibility in determining how sub-modules are integrated to the General Ledger. The user can choose to integrate at branch or warehouse level or at a more granular level. For example, sales and cost of sales can be posted at any of the following levels: branch, product class, geographic area and warehouse.

The General Ledger offers comprehensive ratio analysis queries that show the basic ratios required for financial analysis, such as current ratio, quick ratio and multiple turnover ratios, and includes ratios such as the DuPont and the Working Capital Cycle. Financial statements can be viewed graphically to get a real-time snapshot of the company's health. The financial ratios can be included in the User-defined financial statements can be produced using multiple formats and can optionally be exported to Excel. When produced in HTML format, the user has the ability to drill down to the original source document from within the online report.

SYSPRO can hold up to 10 budgets per GL account. Budgets can be entered manually or imported from Excel. SYSPRO seamlessly integrates with a budgeting system that provides the ability to easily create budgets with immediate visibility of the effect on cash flow.

The Accounts Receivable module allows master/sub customer relationships to be defined. An example would be sales to a national chain, where the sales reporting may be done at the national level (master), but orders are taken and shipped to local branches (sub). The relationship can take two forms. In the first type, all invoices and balances will be held at the master level with only sales history and statistics held at the sub level. All credit checking will be done at the master level. In

the second type, all invoices, balances, sales history, statistics and credit checking will be held at the sub level. Consolidated statements and reports can still be produced for the master account.

SYSPRO also includes a feature designed to import customer and supplier account balances at the invoice level during implementation. This feature can also migrate detailed customer sales history for reporting and query purposes.

SYSPRO offers a customer-supplier contra facility to offset balances in situations where a customer is also a supplier. Both customer and supplier accounts can be held in foreign currencies, and the system allows for invoice revaluation.

The Accounts Payable module performs two primary functions: invoice entry and cash disbursements processing. When invoices are entered into SYSPRO, the user can specify whether they should be matched against Goods Received Notices (GRNs) created during the receiving process or directly expensed. For those directly expensed, SYSPRO allows the distribution of the invoice to multiple General Ledger accounts.

A comprehensive payment cycle exists where all the steps required to perform a payment run are performed in a single program. Multiple payment cycles can be in process at the same time. Payments to suppliers can also be performed electronically using the Electronic Funds Transfer capability.

The Cash Book module is designed to facilitate and expedite bank account reconciliation. The system can integrate with Accounts Receivable, Accounts Payable and Payroll. In addition, it offers automatic bank reconciliation by extracting all cash receipts and disbursements for reconciliation. Payment to cash book beneficiaries can also be performed electronically. The Cash Book module includes a cash flow forecasting feature that allows you to define an unlimited number of models, each with its own time intervals and selections for analysis.

The Fixed Asset module offers a variety of depreciation methods, including MACRS. It offers a comprehensive asset count system and also provides a CAPEX workflow for planning and executing the purchasing or

manufacturing of an asset. On receipt of the item, an asset is generated in a suspended status for review.

The Contact Management module is built using Web Services and is seamlessly integrated to Microsoft Outlook. Suppliers and customers are automatically added to the Contact Management system. All defined operators for the user's organization are added as well. Prospects, or any other type of contact, may be added and monitored. E-mail correspondence (incoming or outgoing) with any contact can be automatically recorded as an activity.

The Customer Relationship Management (CRM) module is a comprehensive, enterprise-class system that allows a business to manage all resources, including customer, vendor and prospect relationships. A seamless link between the other SYSPRO modules and CRM updates all relevant data to the appropriate modules in real-time and enables data to be accessed from any screen. CRM gives SYSPRO users control of all aspects of the customer management cycle in a single database, including marketing, sales, service and collections. CRM is characterized by real-time "front-to-back" office integration.

## Analysis & Reporting

Today's organizations need access to immediate, accurate information in order to make informed decisions, and to see how the organization is progressing towards corporate goals. SYSPRO recognizes this need and offers extensive tools to help analyze the vast amount of data that companies collect. Various tools exist in order to meet the many levels of analysis that is required.

SYSPRO Reporting Services (SRS) provides the backbone to all reports and documents produced by SYSPRO. The underlying tool for generating these reports and documents is Crystal. SYSPRO users therefore have the added benefit of being able to take advantage of the power of Crystal which is seamlessly embedded in SYSPRO. Users are also able to modify existing reports or to create their own reports to satisfy their unique requirements. SRS will optionally archive all reports and documents produced by an organization. These archived reports are stored as XML documents and cannot be altered. SRS also provides a scheduling

tool allowing users to automatically run the required reports and deliver them via email.

Financial Reports can also be produced using SRS and therefore have the same archiving and scheduling capability. Alternately, financial reports can be produced in HTML format with real-time drill down functionality built into the report. Financial Ratios are built into the General Ledger module and provide at-a-glance information of key business metrics for the financial executive. These ratios can also be rendered on the executive dashboard view.

The Executive Dashboard module offers over 300 real-time views of financial and operational data out-of-the box. Crystal Dashboard Designer is used to generate these views, which may be modified or new views may be developed to suit your requirements. Many of these views are interactive and some even provide what-if capabilities. Types of views that are available include flowcharts, comparisons, gauges, widgets, trends, timelines, scorecards, efficiency, performance views showing bottom/top 10, etc.

SYSPRO Analytics offers great operational insight into an organization. The Analytics module creates and maintains OLAP cubes for each area of the organization (manufacturing, distribution and financial), using SQL Server Analysis Services. Analytics provides a powerful "slice and dice" capability that is invaluable to operational executives and personal who may have the need to further investigate data on-the fly. The administration of these cubes is simplified by the SYSPRO interface. Views of the data are easily created to suit the needs of the organization.

SYSPRO Queries are available throughout the system and offer a vast amount of information on one screen. SYSPRO's interface includes many built-in smart tags, hyperlinks and drill-down facilities, further expanding access to information from these queries.

## Pros

- Within a single product, SYSPRO has built-in core functionality for an integrated, end-to-end supply chain solution, including ERP, CRM, Factory Planning, E-Commerce, Warehouse Management and Business Intelligence
- Offers a “real-time” enterprise wide solution with the flexibility to run under a variety of operating platforms including SaaS, hosted and Linux
- Fits a broad range of manufacturing environments, including repetitive, custom, assembly, engineer to order, make to stock, quick turn, batch process and mixed-mode
- Flexible interface that is easily customized and personalized without source code changes
- Seamless links to third party programs is possible using built-in trigger points, VB Scripting associated with any field and customized paned with XML
- Offers a variety of specialty modules, including Return Merchandise Authorization,

Average Cost, Standard Cost and Actual Cost, the cost method must be assigned at the warehouse level; the user may not assign different costing methods per inventory item

- User-interface can get cluttered due to vast amount of information available to users – but can be tailored to reduce clutter
- Configure to order and shop scheduling capabilities are not considered strong
- SYSPRO resellers must be carefully evaluated for their expertise with the product as well as their relevant experience in the applicable manufacturing environment

## Cons

- Not a fit for continuous process manufacturers that do not operate in batch quantities
- Flexibility in the system can create an overwhelming number of choices
- The purchasing system does not automatically select the vendor with the least cost to use in the purchase order creation
- Lacks complete drill down (for both sides of entry) within the General Ledger itself
- Although there are a variety of costing methods offered, such as LIFO, FIFO,

## About Sheldon Needle



A former CFO, consultant and software designer, Sheldon Needle has authored or co-authored more than 20 books on software selection and has contributed articles to major publications, including the Journal of Accountancy and Nation's Business. CTSGuides.com has the distinction of being the very first company to do hands-on, independent evaluations of software for the middle market.

Sheldon speaks with business owners and managers every day about software selection and makes personalized recommendations based on their needs and budget. He is widely known and respected throughout the business software community for his independence, integrity and expertise.

As part of registering for our free software selection kit, you receive a 15-minute consult with Sheldon. Sheldon understands financial and business issues and speaks your language.

He knows the leading software companies—how they compare, their strengths and weaknesses, where they fit into the market and which ones would be suitable for your business.