SYSPRO ERP for
Job Shop Manufacturing

SYSPRO
Simplifying your Success

About SYSPRO

SYSPRO is an internationally-recognized, leading provider of enterprise business solutions. Formed in 1978, SYSPRO was one of the first software vendors to develop an Enterprise Resource Planning (ERP) solution. Today, SYSPRO is a global business solutions vendor, represented on six continents and by more than 1600 channel and support partners. Over 15 000 licensed companies across a broad spectrum of industries in over 60 countries trust SYSPRO as the platform on which to manage their business processes.

Customer focus is a core component of SYSPRO's corporate culture and is one of the key reasons why SYSPRO maintains a strong leadership position in the enterprise application market. By focusing on people and building lasting relationships with customers and partners, SYSPRO consistently excels at guiding customers through all aspects of their implementation and ongoing usage. The aim is to deliver world-class software that gives customers the control, insight and agility they need for a competitive advantage in a global economy. As such, SYSPRO provides a unique combination of robust, scalable technologies that ensure minimal risk and a high return on investment.

SYSPRO is continually developing remarkable software that simplifies operational effectiveness and keeps customers in control of their businesses. Our vision is focused on meeting customer needs today and in the future.

The most integrated, uncomplicated
and effortless business software solution
for small and medium enterprises

The Job Shop manufacturing environment

SYSPRO provides comprehensive solutions to help job shop operators manage the challenges inherent in the custom-design and order fulfillment process, including improving customer collaboration and service, ensuring quality and on-time delivery, and maintaining accurate job costing and pricing.

SYSPRO solutions for Job Shop manufacturing business challenges

- Collaborate with customers on the design and engineering of products
- Control product design changes
- Estimate accurate costs for contract bids
- Improve time to market
- Maintain accurate job costs
- Manage capacity
- Optimize production capacity and increase manufacturing efficiency
- Reduce bottlenecks
- Reduce costs and eliminate waste while remaining flexible and responsive
- Reduce time to market for customer-driven product designs
- Track material and operation flow through manufacturing
- Track project activity and progress

Collaborate with customers on the design and engineering of products

SYSPRO's extensive features foster the centralized management and control of the product design process, while its comprehensive security, customization and multi-lingual capabilities enable you to provide tailored access to external collaborative partners around the globe.

Import facilities and SYSPRO e.net Solutions facilitate improved electronic collaboration with your customers for the creation of customer-specified designs, while the Contact Management system provides a central area for the recording and querying of all communications regarding collaborative activities.

Multi-level bills of material for designs modelled on CAD systems can be imported into SYSPRO, thereby reducing double-entry and the margin for error, as well as providing a solid basis on which to calculate costs and lead times for quoting the customer. In addition, other product-related data such as technical drawings can be imported and linked to the relevant products in SYSPRO, while photographs, video clips and other multimedia files can be linked and viewed on demand.

SYSPRO's powerful engineering change control features enable the creation of user-defined workflows to control the product development process and ensure electronic sign-off. Bill of material component and routing changes, as well as the impact on existing transactional data, are controlled through paperless approval and authorization mechanisms including ECC event triggers as defined by your organization.

" SYSPRO has given us much more functionality than our previous software, especially in the areas of inventory and project management. Compared to five years ago, it has become very easy to find non stock items or to track the cost of making that non-stock item.

- Mahesh Patel, Accountant, Satake
Posted by Satake "

Control product design changes

Constant innovation is one of the key factors to remaining competitive and ongoing research and development to design new and better products is integral to the industry. Your ability to design new products and modify existing designs, as well as improve time-to-market, is critical to remaining competitive and profitable.

SYSPRO provides tools to streamline and track the introduction of new product designs and amendments to existing designs, along with relevant costings. The Engineering Change Control (ECC) module enables you to apply strict control over your design-to-market processes by providing an integrated rules-based electronic workflow system with full version control, security and auditable history.

ECC gives you the tools to record and track new and modified product design and process changes, assess the impact of these changes on costs and associated data, and control the change routing and approval processes. ECC's queries, audit trail, history and archive facilities give you quick online access to details of prior product versions, as well as the option of reverting to the production of a prior product version. In addition, the facility to attach copies of product design drawings to version and release levels provides access to visual details of revisions.

The Where-used Query facility enables you to identify all items affected by the raising of an Engineering Change order for all routes identified as being under engineering change control. In addition, SYSPRO provides a 'replace component where-used' facility that enables the quick replacement of one item with a valid substitute item, thereby streamlining design changes.

SYSPRO's ECC, Bill of Materials, Work-in-Progress and Factory Documentation modules enable you to implement controls to ensure that your products are manufactured under consistent processes, to the correct designs and specifications. Single-level, multi-level, co- and by-product bills are all catered for and flexible bill definitions accommodate complex component and sub-assembly requirements.

Estimate accurate costs for contract bids

Accurate pricing of bids is only possible with an accurate view of costs. SYSPRO's estimating functionality enables the specification of materials, labor and overheads involved in carrying out the specified work, thereby providing a complete view of costs and lead times for job shop or project-based work.

Additionally, it enables you to quickly model the cost and lead time impacts of using alternatives such as different suppliers, routings and materials. In this way, SYSPRO's estimating functionality assists you in assessing the viability of bidding for fixed-price contracts and enables you to accurately price cost-plus contracts for quotes.

" Because SYSPRO recognizes a negative number, the system accommodates reverse job issues. When a customer changes an order in process, it allows us to reverse selected stock code items to remove material from a job and return it to stock.

- Loren H. Semler, President, Semler Equipment
Posted by Semler Equipment "

Improve time to market

Constant innovation is a key factor to remaining competitive and ongoing research and development into new and better products are integral to the industry. Short product life cycles mean the speed with which you deliver these innovations to the market is imperative to remaining competitive and profitable.

SYSPRO's integrated nature and powerful functionality enable you to streamline and track the changes to product designs and costings, as well as to improve the delivery of customer-driven product designs and configurations.

The rules-based Product Configurator enables non-technical staff to rapidly generate accurate product specifications for highly customizable products, thereby helping to reduce lead times and improve the speed and accuracy of order processing in configure-to-order environments. It facilitates the automatic generation of factory orders and purchase orders with all the relevant detail, such as materials and operations, required to make or assemble the correct customer-specific configuration of the product. It mitigates the need for manual input or additional bills of materials to cover all product permutations and drastically reduces the margin for input errors. New permutations may be saved for future orders, making them easy to recall at order entry time.

For complete design-to-order requirements, SYSPRO speeds the processing of product inquiries through its estimating and quotations functionality, with estimating providing an accurate view of both standard and non-standard material and labor costs, ensuring accurate profitability projection and quoting.

SYSPRO's e.net Solutions, multimedia and import facilities enable the rapid incorporation and processing of customer design data, such as drawings and CAD specifications, further improving turnaround time. Furthermore, SYSPRO's powerful factory scheduling features enable you to quote accurate lead times and delivery dates, based on capacity and existing loads. Once a quote is accepted by the customer, the conversion to a factory order is a simple automated process.

SYSPRO's Engineering Change Control (ECC) module enables you to apply strict control and uniformity over your design-to-market processes by providing an integrated rules-based electronic workflow system with full version control, security and auditable history. ECC gives you the tools to record and track product design and process changes, assess the impact of these changes on costs and associated data, and control the change routing and approval processes. SYSPRO provides an integrated view of the development-to-market processes, thus facilitating improved communication between all participants.

Maintain accurate job costs

The work center and structures and routings facilities, provide you with the means to define and maintain the elements required in a sequence of internal or sub-contract manufacturing operations, as well as the structural relationships between parent and component parts.

In custom-build, as well as project and service environments, job cost accuracy is essential to attain correct pricing and profitability, as well as to assess the reliability of the quoting process, while in standard costing environments it is essential for tracking the validity of current standard costs.

For custom-build environments, SYSPRO's Quotations module enables detailed estimates based on all aspects of the job (or jobs) and the automatic creation of jobs, purchase orders and sales orders based on approved quotes. This ensures the integrity of the quoted and margin information throughout the system. For project and service environments, this same functionality is available with the added benefits of hierarchical analysis of costs and margins per head and section.

SYSPRO's fully integrated solution enables the capture, tracking and analyzing of job and product costs and profitability in real time. Details of expected versus actual costs for material and scrap, internal and external labor, fixed and overhead costs per job or group of jobs, are available through SYSPRO's querying, reporting and exception management features. These enable the identification of exceptions and problems as they occur, such as areas of high-cost expenditure, production scrap and rework, and problems in the quoting process. Furthermore, for those businesses wishing to take advantage of government and private enterprise grant programs, detailed R&D job data is easily extracted for regulatory reporting requirements.

With SYSPRO's visibility of product cost details and profit margins, including for co- and by-products, you can evaluate job cost performance, margin analysis and pricing with confidence.

Manage capacity

To execute your production plans and achieve a high level of manufacturing agility, you need visibility of current and future demands, resource availability, schedules and material plans, as well as user-friendly tools that enable you to respond quickly when things change. SYSPRO provides an integrated view of the elements that impact capacity planning, enabling improved resource management and utilization.

SYSPRO's Bill of Materials module provides the tools to maintain the demonstrated capacity for work centers and productive units, while SYSPRO Factory Scheduling enables the configuration of shift patterns and the identification and consideration of multiple constraints such as tooling. The Bill of Materials module enables the configuration of product routings from which Work in Progress and Requirements Planning derive the capacity required, dynamically adjusted for order or batch size.

SYSPRO's Requirements Planning module enables comprehensive demand planning and the modeling of the master schedule and other demand requirements on capacity profiles, over a user-defined horizon. Based on order requirement and lead times, the requirements calculation computes the total capacity load for both open and planned shop orders—dynamically adjusted for batch size—by using infinite backward or infinite forward scheduling. It also provides a simple single-level forward finite scheduling tool.

More sophisticated finite scheduling and sequencing capabilities are provided by SYSPRO Factory Scheduling, including algorithm-based forward, backward and bi-directional finite scheduling, as well as operation sequence optimization. A user-friendly graphical interface affords a real-time view of your capacity loads with one-click highlighting of bottlenecks to provide quick identification of problem areas.

SYSPRO Factory Scheduling delivers a range of features, from manual drag-and-drop to powerful what-if schedule modelling, providing a decision-support tool enabling you to balance demand and capacity constraints. Furthermore, SYSPRO's XML-aware solutions enable version-independent integration with best-of-breed shop floor monitoring and control systems, to enable up-to-the-minute querying and reporting in complex scheduling environments.

> "Very simply, SYSPRO offered in-depth manufacturing functionality, as well as strong financial and distribution capabilities. We also like the ability of SYSPRO e.net Solutions to extend the enterprise."
>
> - Timothy Harryman, Director of Information Systems, Osment Models
> Posted by Osment Models

Optimize production capacity and increase manufacturing efficiency

Increasing manufacturing efficiency means getting the right balance between demand and supply while optimizing capacity, improving throughput, and reducing waste and variable costs. SYSPRO provides interactive decision-support tools that give you visibility and control over all inputs and outputs.

SYSPRO's material requirements planning functionality gives you an integrated picture of your time-phased demand and supply, enabling you to model 'what-if' scenarios to produce viable replenishment plans.

SYSPRO Factory Scheduling assists you in maintaining accurate and up-to-date production schedules that take account of your material plans and the complexities of your factory. This enables better co-ordination between work centers, increased productivity, reduced work-in-progress and achievement of improved customer service levels.

Material and labor tracking, as well as cost, scrap and utilization management are facilitated through SYSPRO's Work in Progress module, which enables you to track in-process production at every stage and identify problems as they occur.

> " SYSPRO has helped us to make bills of material more accurate for manufacturing and resource planning. The Inventory module has increased accountability and visibility as it relates to future needs, and SYSPRO has also helped to enhance our order-taking ability, enabling our volume of orders to increase with little strain on company resources.
>
> - Adam Scholz, ERP Administrator, Canfield Scientific
> Posted by Canfield Scientific "

Reduce bottlenecks

Critical to continuous improvement strategies is the reduction of overall product lead times to enable companies to be more agile and responsive to unpredictable and changing customer demands. Identifying and reducing the number and severity of manufacturing bottlenecks is crucial to any lead-time reduction strategy. SYSPRO's Work in Progress module provides tracking of expected versus actual operation times, assisting you in identifying bottleneck patterns and inaccurate demonstrated capacity estimates.

While nothing can be done to remove short-term bottlenecks, management of production schedules critical to account for them is critical to optimize your production resources and provide realistic order delivery dates.

SYSPRO Factory Scheduling provides one-click highlighting of bottleneck operations on existing schedules, as well as what-if scheduling and sequencing to optimize utilization of available production resources.

"The SYSPRO software is easy to navigate and individual user shortcuts can be created for the various modules utilized by each user. In addition, there are many context-sensitive menus accessed by a right mouse click, which provide links to related modules and information. SYSPRO also includes event management capabilities that allow us to send automatic email notifications for events such as low inventory levels and maxed-out credit limits. These notifications help us to proactively manage customer expectations."

- Matt Hancher IT Director, Compact Industries
Posted by Compact Industries

Reduce costs and eliminate waste while remaining flexible and responsive

SYSPRO's extensive features foster the centralized management and control of the product design process, while its comprehensive security, customization and multi-lingual capabilities enable you to provide tailored access to external collaborative partners around the globe.

Understanding the true cost per transaction of doing business means identifying contributing elements-direct and indirect-across the entire organization. These include not only the cost efficiency of operational activities and their interrelationships, but also the time spent on manual and redundant processes, reconciliations, paperwork and reporting, as well as the cost of lost opportunities from a lack of agility in responding to the global marketplace.

SYSPRO provides essential integrated visibility of your accounting, distribution and manufacturing operations, thereby enabling you to easily identify and track your cost elements and to target areas of waste for improvement programs. Additionally, it facilitates the automation of many processes that have traditionally been labor-intensive and time-consuming, such as operational-to-financial reconciliations, and communicating with trading partners. It offers Standard, Average, Last, FIFO and LIFO costing methods flagged at warehouse level, as well as actual cost tracking, thereby providing accurate operations-focused inventory valuation, which in turn supplies accurate input for product pricing and profitability.

Comprehensive multi-level costing of manufactured items is provided through SYSPRO Bill of Materials and Work in Progress, with SYSPRO Product Configurator and Quotations and Estimating providing additional tools for assemble/make/engineer-to-order environments.

Lot traceability, serial tracking and return merchandise functionality, along with SYSPRO's inspection systems, provide tracking of product defects, thereby helping you mitigate costly recalls.

SYSPRO's cost roll-up and implosion functionality, along with user-friendly costing queries, provides fast access to reliable information on which to base pricing and profit margins. In addition, its extensive what-if costing features enable modeling and comparison of the cost effects of alternative inputs for raw materials, production routes, labor rates and sub-contractor rates.

SYSPRO provides work in progress tracking, enabling evaluation of detailed actual versus expected costs, as well as targets for cost savings and continuous improvement programs. Used in conjunction with SYSPRO Projects and Contracts, it facilitates comprehensive project job costing. Visibility of production scheduling, along with what-if sequencing and scheduling tools, enhances manufacturing agility and competitiveness and helps to prevent lost sales in unpredictable demand environments.

SYSPRO's General Ledger (G/L) provides powerful queries with drill-down from journal to transaction source, as well as at-a-glance financial and activity ratios. Processing time is greatly reduced through features such as sub-ledger integration and reconciliation, journal copy, journal import, automatic weighted transfer of costs and G/L analysis. Furthermore, SYSPRO's ease of ledger consolidation across complex businesses, along with its XML-based financial reporting features, enables prompt web-based deployment of financial reports to SYSPRO and non-SYSPRO users alike.

SYSPRO's flexible user-defined stationery formats, along with SYSPRO Reporting Services (SRS), precludes the need for pre-printed stationery for invoices, delivery notes, order acknowledgments, dispatch notes, purchase orders and statements. In addition, SRS provides considerable savings by reducing the need for paper-based audit trails and reporting. Its automatic scheduling tool removes the need for resource-intensive supervision of periodic and month-end reporting. Furthermore, the archiving system provides for the electronic storage of reports as run, thereby enabling users to view them online to discern actual print requirements.

SYSPRO's Office, fax and email integration (SOI) module saves time, postage and paper by enabling you to deliver transactional documents, such as purchase orders and statements, directly from their point of extraction via secure electronic transfer, such as 128-bit encrypted PDFs. Additionally, SOI facilitates direct queries of key operational data from the desktops of enterprise-wide users and trading partners, without the need for the desktop installation or licensing of SYSPRO.

The capability to extend electronic communication, so as to automate the acceptance and acknowledgment of orders on a 24/7 basis, is provided via SYSPRO e.net Solutions, Document Flow Manager and Web Applications.

SYSPRO e.net Solutions also enables the non-proprietary and version-independent integration with mobile devices and best-of-breed applications, such as shop floor control and quality monitoring systems.

The ROI of implementing SYSPRO is rapidly realized through full visibility of an integrated picture of your business operations and the resultant reduction in operational costs, processing time and human resources.

Excess inventories tie up valuable resources, in terms of both cost and warehouse management. SYSPRO helps you optimize, manage and track your inventories through its Inventory Optimization, Warehouse Management, Inventory, Material Requirements Planning, Purchase Order and Work in Progress modules. In addition, the Purchase Order and Landed Cost Tracking systems provide a more accurate estimate of the full landed cost of imported goods, with the GRN matching and reconciliation features facilitating electronic reconciliation of supplier deliveries and charges.

Accounts Receivable, Accounts Payable and Cash Book provide comprehensive balancing and reconciliation tools, as well as credit and cash flow management capability. Additionally, efficient administration of customer accruals, rebates and deductions is facilitated through SYSPRO Trade Promotions Management. Commitment accounting is provided through SYSPRO Accounts Payable and Purchasing, while the Assets Register ensures accurate maintenance and depreciation costing and asset profit and loss realization.

Reduce time to market for customer-driven product designs and variations

In industries where the requirement for customizable end-products is common, flexibility, speed, and accuracy in meeting customer demand are essential to remaining competitive.

In industries where the requirement for customizable end-products is common, flexibility, speed, and accuracy in meeting customer demand are essential to remaining competitive. SYSPRO enables you to improve your time-to-market performance and streamline constituent processes through its rules-based Product Configurator. Not only does it provide streamlined order-taking by non-technical staff, it facilitates the automatic generation of factory orders and purchase orders, with all the relevant detail, such as materials and operations required to make or assemble the correct customer-specific configuration of the product.

In addition to releasing technical staff from the order-taking process, the Configurator mitigates the need for manual input or additional bills of materials to cover all product permutations, and drastically reduces the margin for input errors. New permutations may be saved for future orders, making them easy to recall at order entry time. Additionally, for complete design-to-order requirements, SYSPRO speeds the processing of inquiries through its estimating and quotations functionality, with estimating providing an accurate view of both standard and non-standard material and labor costs, ensuring accurate profitability projection and quoting.

Furthermore, SYSPRO's powerful factory scheduling features enable you to quote accurate lead times and delivery dates based on capacity and existing loads. Once a quote is accepted by the customer, the conversion to a factory order is a simple automated process.

Track material and operation flow through manufacturing

SYSPRO enables you to easily query the status of your work in progress in terms of costs, material and scrap quantities, labor hours and manufactured quantities. In addition, optional lot traceability and serial tracking functionality enable you to identify the jobs to which traceable raw materials have been issued.

To identify and reduce waste and inefficiencies in the production process, you need real-time access to accurate material and labor flow data. SYSPRO enables you to easily query the status of your work in progress in terms of costs, material and scrap quantities, labor hours and manufactured quantities. In addition, optional lot traceability and serial tracking functionality enable you to identify the jobs to which traceable raw materials have been issued.

In SYSPRO, the material and labor allocations are created manually for a non-standard job, or automatically for a job created from a bill of material or estimate. In all cases, you can specify whether the materials are required a certain number of days before the job finish date, or at the start of a specific operation. This provides complete visibility of the material and labor that are required for any particular job, and when they are it is required in the production process. Also, once a job is in progress, you can easily pinpoint where the job is currently located in the routing, as well as what material has been issued so far, and the job's overall progress.

Trial-kitting mechanisms provide complete visibility of the availability of materials required for jobs. Flexible posting functionality enables you to issue materials and labor to jobs at any time via a number of methods, including specific and kit issues. In addition, SYSPRO e.net Solutions and job import functionality enable seamless integration of shop floor data collection systems.

Powerful queries and reports provide detailed information on job status and delivery performance information.
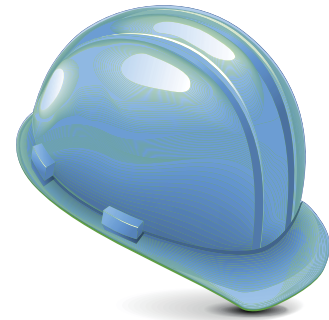
Track project activity and progress

SYSPRO's Work in Progress module provides tracking information, which enables you to monitor the progress of a project by providing a list of complete and outstanding operations per job, while visibility of production scheduling, along with what-if sequencing and scheduling tools, enhances production agility.

To identify and reduce inefficiencies in the construction process, you need real-time access to accurate material and labor flow data. SYSPRO enables you to easily query the status of your work in progress in terms of labor hours, costs, material and scrap quantities, and completed quantities and operations. In SYSPRO, the material and labor allocations are created manually for a non-standard job, or automatically for a job created from a bill of material or estimate. In all cases, you can specify whether the materials are required a certain number of days before the job finish date, or at the start of a specific operation. This provides complete visibility of the material and labor that are required for any particular job, and when they are required in the production process. Also, once a job is in progress, you can easily pinpoint where the job is currently located in the routing, as well as what material has been issued so far, and the job's overall progress.

Powerful queries and reports provide detailed job information on status and delivery performance information.

SYSPRO for manufacturing

The 21st century manufacturer understands the need to be agile, flexible and responsive, and requires a software solution that gives them leverage to use whatever production methods are appropriate. The software also needs to provide visibility through the manufacturing chain – back to suppliers, along the production process, and up to customers. The software must also be able to integrate with other systems in the production environment. Furthermore, in the modern customer-centric world, organizations need to move from being purely transaction-focused to being more relationship-oriented, and to improve connections and communication, both internally and externally.

The challenge is how to achieve these goals in the most efficient, streamlined and cost-effective way possible.

SYSPRO ERP (enterprise resource planning) software provides a fully integrated solution with a comprehensive set of tools to help manufacturers plan, execute and control production in discrete, job shop, process or mixed-mode manufacturing environments. SYSPRO functionality improves core competencies such as:

"SYSPRO has become critically important because it has enabled us to integrate job estimating with work in process so that I can quickly and accurately formulate quotes on the computer system, based on actual costs incurred. While the value of the computerized control of our manufacturing and accounting procedures is quite obvious, the worth it provides for managing the business is even greater. Every job we've done in the last five years is in the system. I can review previous quotes for similar jobs and compare them with actual job costs so that estimating is much more accurate.

- Hal Johnson, Jr., President, Harold Johnson Optical Labs
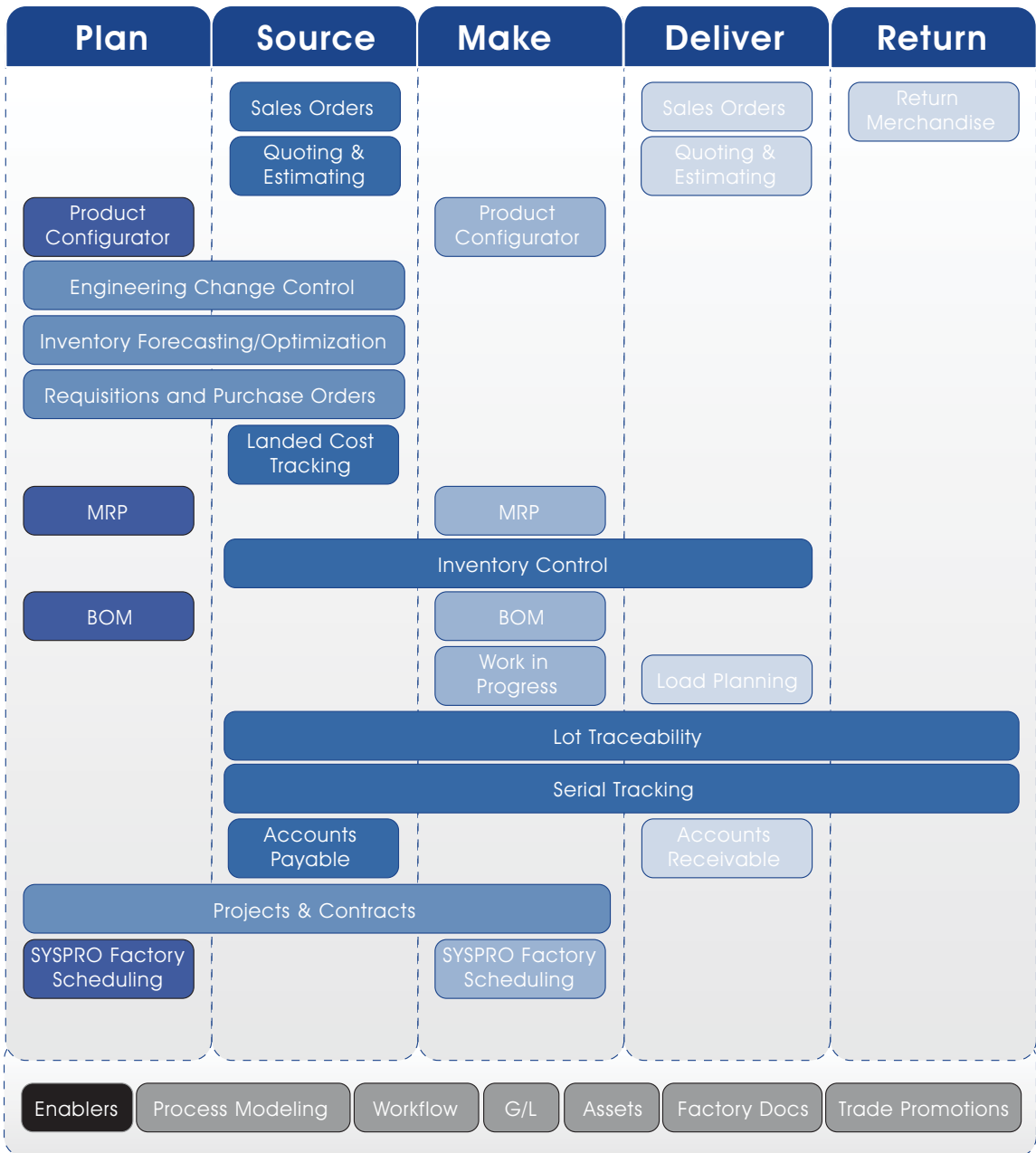Posted by Harold Johnson Optical Labs "

- Managing inventory levels to optimize the competing demands of availability versus cost
- Providing quotes that are accurate and keep costs under control
- Defining comprehensive bills of materials (BOM) from simple to very complex bills
- Calculating lead and elapsed times, and order quantities
- Planning and scheduling of production
- Material requirements and capacity planning
- Managing material, labor and scrap during work in progress
- Integrating with CAD and shop-floor data collection systems
- Cost control and tracking
- Performing 'what-if' modeling on material, labor and routing costs

Plan	Source	Make	Deliver	Return
	Sales Orders		Sales Orders	Return Merchandise
	Quoting & Estimating		Quoting & Estimating	
Product Configurator		Product Configurator		
Engineering Change Control				
Inventory Forecasting/Optimization				
Requisitions and Purchase Orders				
	Landed Cost Tracking			
MRP		MRP		
Inventory Control				
BOM		BOM		
		Work in Progress	Load Planning	
Lot Traceability				
Serial Tracking				
	Accounts Payable		Accounts Receivable	
Projects & Contracts				
SYSPRO Factory Scheduling		SYSPRO Factory Scheduling		

Enablers	Process Modeling	Workflow	G/L	Assets	Factory Docs	Trade Promotions

Supply Chain Framework

Microsoft Partner
Gold Independent Software Vendor (ISV)

Technology Evaluation Certification
- Discrete Manufacturing
- Mixed Mode Manufacturing
- Process Manufacturing

The TEC certification symbol is a recognized indicator that you have satisfactorily completed the TEC request for information (RFI), and demonstrated your solution's ability to address real-world business processes.

SYSPRO™
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