



SYSPRO ERP for

# Process Manufacturing



**SYSPRO**<sup>TM</sup>

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

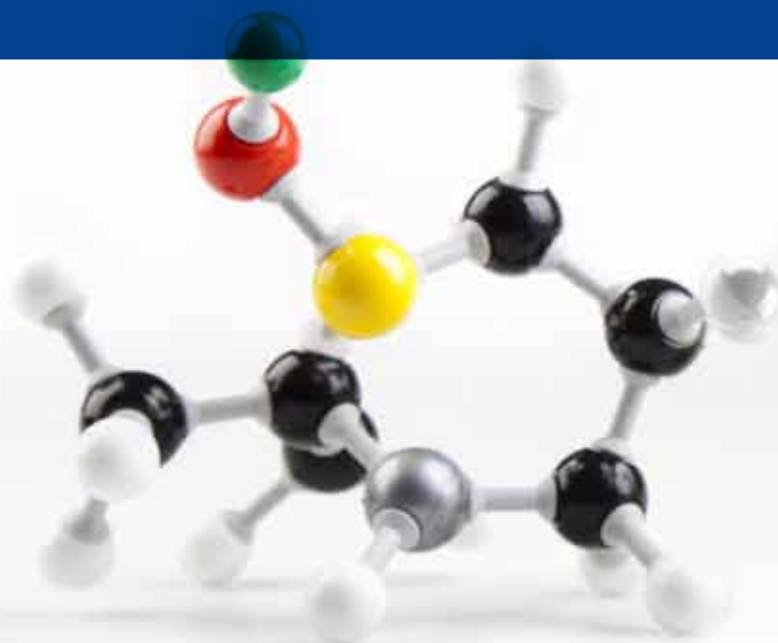


# The Process Manufacturing Environment

SYSPRO offers process manufacturers a comprehensive set of tools and features to assist in managing the requirements inherent in process operations, including recipe scalability, variable production output and traceability.

## SYSPRO solutions for Process Manufacturing business challenges

- Accommodate variable end-products which result from regrading and unpredictable chemical processes
- Control product formula changes
- Ensure process-manufactured products are manufactured to spec to minimize waste
- Ensure quality of raw materials and monitoring during production
- Manage complex production recipes
- Manage different units of measure for different levels in product bills of material
- Manage product and raw material traceability



## Accommodate variable end-products which result from regrading and unpredictable chemical processes

SYSPRO's Work in Progress inspection system gives you the tools to record the inspection details of manufactured products and, depending on the results, select to receipt, scrap or rework quantities.

Using SYSPRO's co-products and manufacturing inspection functionality, you can easily cost and capture the receipt of multiple products of varying grades from jobs originally planned for single-grade items. You can choose to apportion costs between materials and co-products according to a percentage breakdown for total material, operation and sub-contract cost, or you can define percentages against specific operations and materials.

Product quantities in inspection are visible but unavailable for use until accepted into stock. Within the inspection function, you can capture detailed records of counts, inspection, scrap, rework and stock receipts. You can receipt inspection products as the original product to manufacture or as a different product, or products, which is useful for end-products of variable grade. Also, you can receipt items into a different warehouse from the one that was originally planned.

“ The sales order entry functions are straightforward and intuitive. In addition, they're integrated with inventory and inventory management. At any time, and at any stage of the supply chain, we can get accurate, real-time information on our products.

- Jaime de Sequera, Chief Information Officer, Natural Factors  
Posted by Natural Factors



## Control product formula changes

Constant innovation is one of the key factors to remaining competitive, and ongoing research and development to formulate new and better products is integral to the industry.

SYSPRO's Engineering Change Control (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 formulae and specifications. Single-level, multi-level, co-and by-product bills are all catered for. Flexible bill definitions accommodate complex raw material and intermediary requirements to ensure precision in quantities required for bulks, batches and packs. You can define each structure level in a bill based on absolute fixed quantities, fixed quantities per, or wet weight percentages. Precision is further enhanced by SYSPRO's allowances for high tolerances in quantity definitions, as well as accommodating the number of levels in a multi-level bill.

SYSPRO's ECC enables you to streamline and apply strict control over your design-to-make processes by providing a 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 formulae 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 earlier product version if required.

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 formula changes.

## Ensure process-manufactured products are manufactured to spec to minimize waste

Where products cannot be reduced back to their original state once in process, the cost of inaccuracy in design and production is high.

SYSPRO's Engineering Change Control module provides the workflow tools to manage the product design process, thereby helping you to ensure that new and re-designed products pass through the relevant testing and approval processes before release. In addition, SYSPRO provides flexible definitions for raw material requirements in the bill of materials.

Accuracy in chemical product bills is facilitated through the option to define the percentage of each raw material required to make a chemical product. This ensures precision in quantities required for batches. SYSPRO also provides for the configuration and tracking of quality inspection points and metrics, to help ensure product quality and high production yields.





## Ensure quality of raw materials and monitoring during the production process

**SYSPRO enables you to implement continuous improvement by helping you to identify problems and points of waste as they happen. Raw materials and manufactured products often vary in grade and quality so, for many industries, tracking and control are essential to reduce waste, scrap and defects.**

SYSPRO allows you to specify approved manufacturers for raw material supplies, and supplier performance can easily be tracked via queries and reports. In addition, SYSPRO facilitates the tracking of materials from purchase through production to customer, thereby maximizing quality control and providing you with the tools to manage product recalls, should they occur.

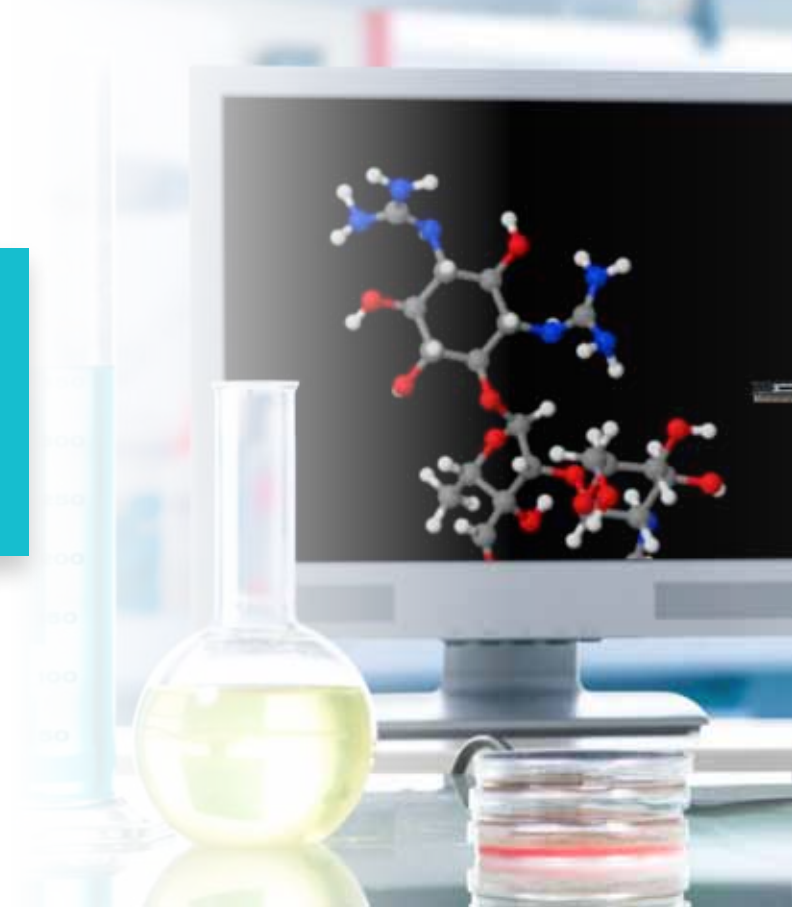
You can flag purchased items as requiring inspection so that during receipting, detailed records of counts, inspection, scrap, rejects and returns is recorded. Units in inspection are visible, but unavailable for use until accepted into stock. Similarly, SYSPRO Work in Progress inspection gives you the tools to inspect manufactured product quality and, depending on the results, select to receipt, scrap or rework quantities.

## Manage complex production recipes

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

SYSPRO's multi-level bill of materials functionality enables the definition of complex production recipes of up to 15 levels per route, and 10 routes per finished product. Control over recipe changes is seamlessly handled by the Engineering Change Control module, while a where-used query and substitution facility enables quick and easy replacement of ingredients. The relationship validation function enables you to easily identify illogical relationships within your bills, while the structure validation function facilitates quick deletion of redundant or superseded components from bill of material structures.

For each bill level, you can define ingredient quantities such as quantity per, fixed quantities or wet weight percentages in relation to that specific level's parent item. Component and operation copy, insertion, and move facilities enable straightforward maintenance of new and existing bills. SYSPRO's multimedia functionality enables you to attach visual and textual material, such as videos, photographs, and certificates of conformance, to structures and operations. This aids production and quality assurance staff, while custom forms enable you to create additional user-defined fields. Phantom bills accommodate transient production items, and planning bill functionality aids option forecasting and planning. In addition, the configuration and manufacture of multiple items which are produced in a single process are accommodated by SYSPRO's co- and by-product features.



SYSPRO provides various operation run time methods, as well as material and progressive scrap functionality. The capture of various lead time elements enables accurate calculations of manufacturing and cumulative lead times, which in turn aid efficient materials planning and production scheduling, as well as product costing.

Information on tooling, operator skill levels, operation instructions and testing requirements can also be added to the operation and printed on SYSPRO's user-defined factory documentation.

The Work in Progress module enables seamless ingredient substitution where actual ingredients differ from planned. Furthermore, where intermediate or finished products differ from planned, the Work in Progress inspection functionality enables receipting of these products as alternate stock codes, or into alternate warehouses or bins.



## Manage different units of measure for different levels in product bills of material

SYSPRO's Inventory module enables the definition of multiple user-defined units of measure (UOM) for stocked items: Stocking UOM, Alternate UOM, Other UOM and Manufacturing UOM. These units of measure, along with their conversion factors, are used in various parts of the system to ensure accurate quantities for sales, purchasing and production.

For production purposes, SYSPRO's multi-level bill of materials functionality enables you to define the manufacturing recipes and methods for bulk, intermediate and pack items, allowing for up to 15 levels per route, and 10 routes per finished product. For each level in a multi-level bill, you can define ingredient quantities as quantity per, fixed quantity or wet weight percentage in relation to the UOM defined for that level's parent item and routing.

“ SYSPRO has enabled us to do more with the same number of people; without it, we probably would have needed more staff. Because the system has supported our expansion we have benefitted from greater profits. It has therefore proven itself as an essential part of our investment in the company.

- John Wells, Managing Director, AJ Wells  
Posted by AJ Wells



## Manage product and raw material traceability

Synchronizing supply with customer demand is a key requirement to prevent costly line stoppages in assembly plants, particularly for component and material suppliers of original equipment manufacturers (OEMs).

Whether a compliance-critical requirement, or an analysis tool for continuous improvement strategies, the traceability of products from material origins through manufacture to final destination is a key system requirement in many industries.

SYSPRO facilitates the recording of traceability and quality data on materials and products from purchasing through inspection, manufacturing, manufacturing inspection, stocking and sales. The recording of expiry and shelf-life information is also facilitated, and powerful queries enable both upward and downward searches by stock code, lot number and transaction type. SYSPRO's lot traceability and serial tracking functionality afford full visibility to the origins, build and customer destination of products and batches, thereby provid-

ing the means to rapidly trace and analyze the source of defects should they occur. In addition, SYSPRO's Engineering Change Control module enables complete management and traceability of changes to product designs, while the Return Merchandise Authority provides consistent handling of product returns, as well as analysis data for improvement programs.

SYSPRO's integrated nature enables full backward and forward traceability, as well as comprehensive record-keeping to meet strict compliance requirements. Shelf-life management is facilitated through expiry dates, and you can use SYSPRO's customization and custom form features to record other compliance-code dates, as well as to capture storage and transport compatibility codes.

“

HACCP is a lot like ISO Certification in that it is very detailed and demanding. Excellent tracking of products by lot is critical for us. SYSPRO gives us the tools to meet the current and future HACCP requirements.

- Barbara-Ann O'Brien, Manager, Bonte Foods  
Posted by Bonte Foods

”

For quality management, SYSPRO enables the configuration and tracking of quality inspection points and metrics to help ensure product quality and high production yields. The system can be configured to force sample or full quantities of items through inspection processes, where detailed records of counts, inspection, rework, scrap, defects and returns can be recorded. Basic quality management is further enhanced through the ability to specify approved manufacturers for material supplies, as well as the ability to monitor supplier performance.

Tracking material involves knowing where it is at any point in time. In addition to SYSPRO's powerful traceability features, the system provides inventory management and visibility across multiple physical and virtual locations, as well as detailed tracking of purchase orders, sales orders, works orders, inter-warehouse transfers and available-to-promise quantities and dates. SYSPRO e.net Solutions enables integration with scanning and RFID systems to reduce processing time as well as processing lags and errors as material moves through the different processes.

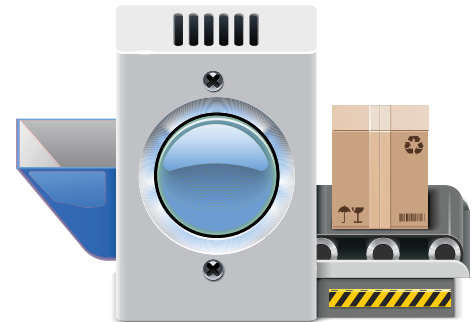
# SYSPRO for manufacturing

The 21<sup>st</sup> 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:

- 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 material (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

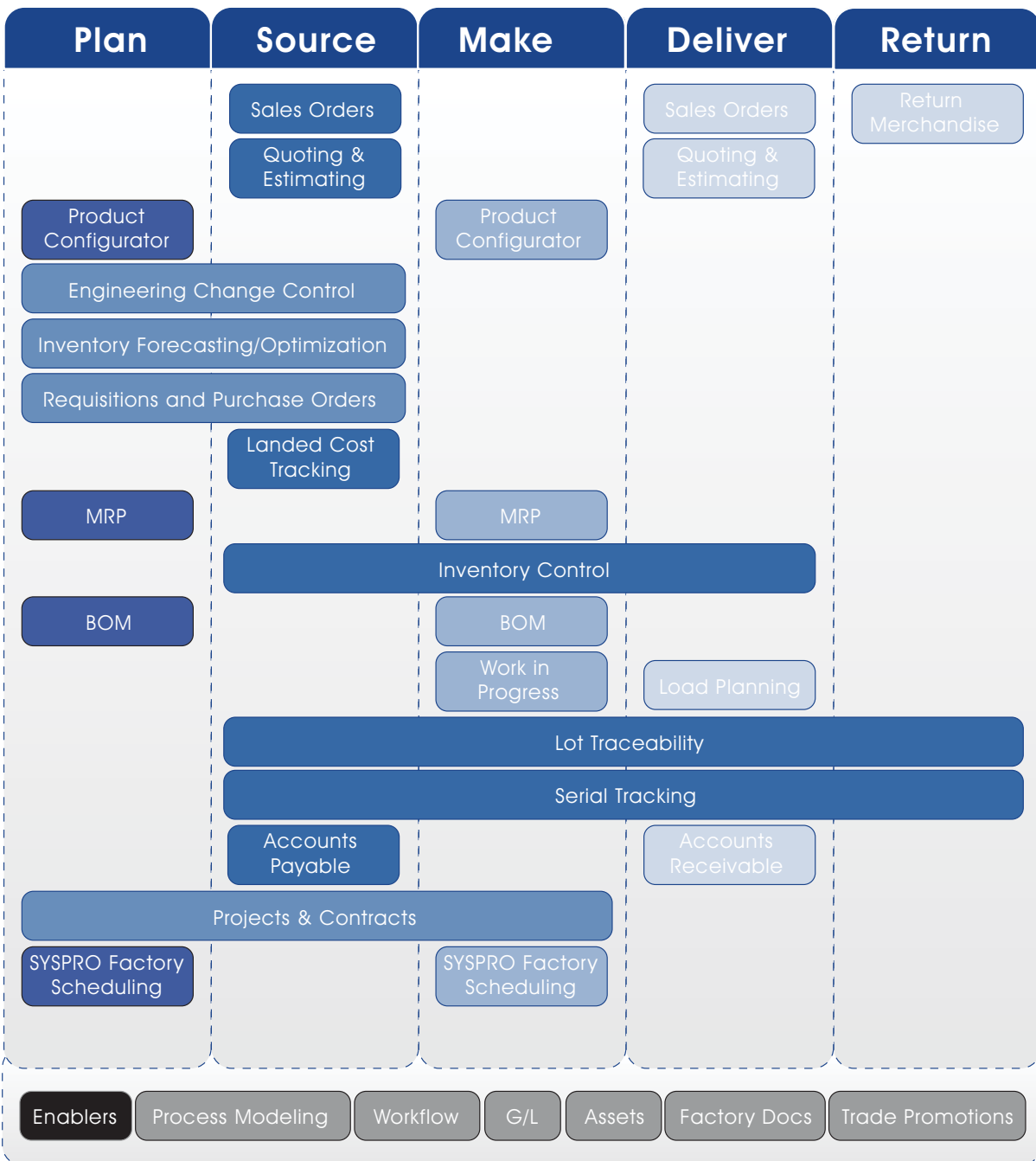
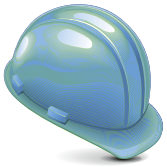


“ We are seeing significant improvements in lead time and delivery adherence, and the better batching and sequencing of the right jobs through production has also resulted in efficiency improvements. Essentially, we now have the systems in place to enable us to fully utilise our production facilities and so provide the capacity needed to effectively meet future business growth.

- Andrew Lloyd, IT Manager, Silflex Ltd  
Posted by Silflex Ltd

”





Supply Chain Framework







**Africa and the Middle East**

SYSPRO (Pty) Limited  
Block A  
Sunninghill Place  
9 Simba Road  
Sunninghill  
Johannesburg  
2191  
South Africa  
Tel: +27 (0) 11 461 1000  
Fax: +27 (0) 11 807 4962  
Email: info@za.syspro.com

**Canada**

SYSPRO Software Limited  
4400 Dominion Street  
Suite 215  
Burnaby (Vancouver)  
British Columbia  
Canada  
V5G 4G3  
Tel: +1 (604) 451-8889  
Fax: +1 (604) 451-8834  
Email: info@ca.syspro.com

**USA & Americas**

SYSPRO Impact Software, Inc.  
959 South Coast Drive, Suite 100  
Costa Mesa, (Los Angeles region)  
California 92626  
USA  
Tel: +1 (714) 437 1000  
Fax: +1 (714) 437 1407  
Toll free: 800 369-8649  
Email: info@us.syspro.com

**Asia Pacific**

SYSPRO Software Pty Ltd  
Suite 1102, Level 11  
201 Miller Street  
North Sydney NSW 2060  
Australia  
Tel: +61 (2) 9870 5555  
Fax: +61 (2) 9929 9900  
Email: info@au.syspro.com

8 Eu Tong Sen Street  
#19-91  
The Central  
Singapore  
059818

Tel: (65) 6256 1921  
Fax: (65) 6256 6439  
Email: info@sg.syspro.com

All enquiries:  
Australia: 1300 882 311 (Local call)

**UK & Europe**

K3 Syspro  
Baltimore House  
50 Kansas Avenue  
Salford  
Manchester  
United Kingdom  
M50 2GL  
Tel: +44 161 876 4498  
Fax: +44 161 876 4502  
Email: info@k3syspro.com



**www.syspro.com**

V02 Copyright © 2014 SYSPRO. All rights reserved.

All brand and product names are trademarks or registered trademarks of their respective holders. No part of this material may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without prior written permission from the publisher.