WHITE PAPER

SYSPRO™

Leveraging A Demand-Driven Manufacturing Model To Enhance Profitability

Giving manufacturers a strategic focus for a competitive edge.

SYSPRO™

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Executive Summary

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Executive Summary

Today, the more successful manufacturers are those which have adopted effective and efficient fulfillment strategies. In fact, many have chosen to become demand-driven rather than supply-driven, meeting the needs of a dynamic marketplace by building products to order rather than investing in large inventories, building products to stock and attempting to create customer demand. Demand-driven manufacturing, however, by its very nature, necessitates rethinking traditional manufacturing methods in favor of "lean" manufacturing principles, a highly efficient and collaborative supply chain, rapid order turnaround, the efficient deployment of resources, profitable contracts and, last but not least, sustained customer satisfaction.

In many ways, a demand-driven manufacturing model cedes control to the marketplace. In other words, it relies on a "pull-through" rather than "push-through" scenario.

This paper discusses the fundamentals for successful demand-driven fulfillment manufacturing, including optimal channel and customer relationships, informed online buying and selling, flexible product configuration and order fulfillment and integrated operational infrastructures. It details the challenges that manufacturers face today, the most efficient infrastructures to accommodate the demand-driven model and the value concepts that are emerging in the demand-driven environment.

Manufacturers' Challenge

"The adoption of the demand-driven manufacturing model requires exacting controls, such as those provided through a real-time enterprise software solution."

The Manufacturers' Challenge

Today, manufacturers of every type are in a vicious cycle of catch up. Customers want faster delivery. Product life cycles are shortening while innovation expectations are rising. Customers are learning to expect greater product customization, value added extras and order change flexibility. For every operational or product improvement a manufacturer makes, the bar gets raised even higher by the demands of the marketplace. To address these needs, the adoption of the demand-driven manufacturing model requires exacting controls, such as those provided through a real-time enterprise software solution.

Today, the struggle to improve fulfillment performance crosses all industry sectors. For example;

- Automotive suppliers forced to co-locate alongside OEMs are struggling with the high costs of setting up operations and achieving Just-In-Time (JIT) performance levels. To ensure these levels are met, they need mechanisms in place, designed to achieve demand-driven strategic and tactical goals on a daily basis.
- For those that fabricate parts, the struggle is synchronizing schedules across the supply chain to meet promised delivery dates. By establishing flexible blanket agreements with suppliers, reducing cycle times and bottlenecks and improving equipment uptime, these business goals are more readily met.
- Manufacturers of diversified product lines desperately require the ability to maximize ROI with strong financials and accurate production data that reflect how each line contributes to the overall profit picture.
- Custom job shops are faced with ever tightening profit margins that rely upon the generation of estimates that accurately reflect actual costs.
- Distributors have their own problems. Their very existence relies on the ability to track and value inventories - in single and multiple warehouse locations, in consignment situations and in transit. They need precise inventory tracking mechanisms that allow inventory to be valued according to warehouse location, to ship from the nearest location and to adjust records on a real-time basis as line items are entered on sales orders.

Manufacturers' Challenge cont.

"The missing element in most company's initiatives is a strategic intelligence that permeates enterprise wide tactical and operational decision-making."

Both manufacturers *and* distributors are rapidly moving into a business climate that is demand-driven with the ability to fulfill orders to demand without incurring excessive inventory levels, taking a hit on margins and losing important customers. In this "lean" environment, the focus shifts from individual supply chain elements to a holistic approach that emphasizes throughput of the entire supply chain. The goals are increased profitability, greater return on assets – such as upgrades to the most intelligent machinery – and maintaining and building the customer base. However, these goals are proving more difficult to achieve than was once believed.

The missing element in most company's initiatives is a strategic intelligence that permeates *enterprise wide* tactical and operational decision-making. Decisions need to be based on what is best for the company, as well as for the customer. The right decisions are based on getting the correct data in real-time in the right format, and this can differ for every company.

Furthermore, most companies tackle fulfillment at the functional level, in isolation of other interdependent departments. As a result, the improvements made in one area of the company fail to get noticed, since other areas don't leverage the performance gains. For example, the development of configurable products to speed production, improve pricing and reduce engineering delays is only as beneficial as the willingness of the sales people to sell configured goods. The same goes for cycle time reductions in production. If nothing is done to improve transportation cycle time, the competitive opportunity may be lost.

Nowadays, manufacturing operations are indistinguishable from the supply chain. David Andrews, editorial director of *Supply Chain Systems* Magazine, notes "If you have problems manufacturing your product in the quantities that your customers demand and in delivering them on time in the proper sequence, guess what? You have a problem in your supply chain."

Demand-Driven Manufacturing & the Infrastructure

"As companies get pressured to do more for less, they must also select customers and distribution channels on the basis of profitability, cost, sales opportunity, market share, economies of scale and ownership of a market or niche."

Demand-Driven Manufacturing and the Infrastructure

Real-time enterprise software, such as that offered by SYSPRO, provides an operational business infrastructure in which the organization can establish strategic operational guidelines throughout the supply chain and provide the necessary information to make fulfillment decision-making more effective, efficient and profitable. It leverages the concept of "lean" manufacturing, which is the very foundation of the demand-driven manufacturing concept.

This type of infrastructure provides organization and analysis of business and market data, so that it can be used in an aggressive manner to formulate strategies that best meet the needs of targeted markets, through either traditional or Internet channels. It creates a more meaningful knowledge base on which a company can proactively use available resources and tools, such as integrated software solutions and the Web, to more efficiently and effectively satisfy the requirements of customers better than the competition. It also capitalizes on and creatively deploys available resources to gain competitive advantages to achieve short and long term goals and objectives, including higher profit margins – a must in today's highly competitive marketplace.

As companies get pressured to do more for less, they must also select customers and distribution channels on the basis of profitability, cost, sales opportunity, market share, economies of scale and ownership of a market or niche. A growing number of companies are selecting and managing channels on the basis of performance and profits, as well as their ability to provide technical and process capabilities that improve communications and operations. These forward looking companies focus on strategic objectives and software systems, such as ERP and CRM solutions, to gain insight into and control of the supply chain. In effect, turning it into an extension of the enterprise with 360° visibility.

Demand-Driven Manufacturing & the Infrastructure cont.

"A fully integrated, extended enterprise system is necessary for a successful demand-driven manufacturing model."

The core elements of the solution revolve around developing win/win channel and customer relationships; having all the right information to make leveraged buying decisions and profitable sales agreements; anticipating order and fulfillment requirements in order to be highly responsive and having the organizational fluidity to coordinate efforts, restructure operations, change processes and keep all the right people informed with what they need when they need it.

These core principles are the basis of operational strategies necessary to achieve competitive demand-driven performance for all manufacturing companies. Many are already working on this to some extent or another. Perhaps the first stage is the selection of the most judicious software tools to support their efforts. For example, a solution that includes Activity Based Costing software will facilitate identifying "loss leaders" which may be part of the product mix. In addition, the inclusion of Advanced Planning and Scheduling software can be a powerful contributor to agile performance.

A fully integrated, extended enterprise system is necessary for a successful demand-driven manufacturing model. Such an enterprise starts with determining what constitutes an optimal relationship with customers and channel partners, and then working to support these relationships and operational decision-making. The critical success factors are recognizing where profit margins and risks lie in forming demand forecasting and planning techniques that address growth goals, promotional events and capacity constraints and value added processes that build relationship longevity.

Emerging Value Concepts

"To build optimal win/win relationships, these companies are doing advanced sales, cost and/or value added analysis and using these results to make better marketing decisions, develop better product mix strategies, negotiate better deals, and craft better terms and conditions in their contracts."

Highest Profitability at Lowest Risk

Not long ago the idea that suppliers might elect not to do business with a prospect or customer was a radical business concept. Today, it is becoming more acceptable, and in some industries, such as retail, engineering and automotive, it is done with some frequency. The basis of these decisions very often comes down to actual costs of doing business with a particular customer, channel or contract, which impacts margins and profitability. To build optimal win/win relationships, these companies are doing advanced sales, cost and/or value added analysis and using these results to make better marketing decisions, develop better product mix strategies, negotiate better deals, and craft better terms and conditions in their contracts. Even so, some companies elect to keep these risky, under performing accounts and products for market share or other reasons.

Forecast Collaboration

One of the greatest struggles for suppliers is gaining visibility to actual demand. To date, channel partners and customers have held this information back from their suppliers. During the past three years, momentum has begun across a number of industry sectors to solve this problem using standardized electronic collaboration techniques. Officially this is known as Collaborative Planning, Forecasting and Replenishment (CPFR). Unofficially, it is supported by electronic planning forms used by partners to share, adjust and update demand forecasts and associated replenishment plans, similar to the CPFR approach.

Demand Planning

Another major problem for manufacturers is demand variability, particularly in the make-to-order environment. Predicting demand is hard enough for most companies that do not have the advantages of long-term contractual commitments. The issue is further compounded in the make-to-order arena where procurement and production lead-times often exceed order fulfillment cycle times. To cover unknown availability, suppliers often carry higher levels of inventory than are desirable. This leads to the unproductive use of cash resources. However, by using sophisticated software-based forecasting tools, such as those offered by SYSPRO, and formulating a strategic vision, make-to-order manufacturers can rapidly maximize production resources, customer service levels and profits.

Emerging Value Concepts cont.

"Very often providing the best relationship and maintaining best in class competitiveness hinges on access to current and relevant internal and external information on operational capabilities, forecasts, product knowledge, inventory and capacity levels, customer history, tracking, cost and profitability analysis and supply chain visibility."

Proactive Relationships

Building and maintaining strong and mutually beneficial relationships is core to a successful demand-driven strategy and to the extension of the enterprise, which relies on the ability to be highly informed and proactive. It is the glue that keeps these relationships intact. Relationships are built from providing the best products and services, delivering as promised and on time, having the facts on demand and communicating proactively when issues arise. Very often providing the best relationship and maintaining best in class competitiveness hinges on access to current and relevant internal and external information on operational capabilities, forecasts, product knowledge, inventory and capacity levels, customer history, tracking, cost and profitability analysis and supply chain visibility. The latter is particularly critical for manufacturers that rely on outsourcing.

All those who interact with customers - from sales and service people to those in finance, marketing and production - need immediate and common access to applications and information that will enable them to make win/win decisions and to be proactive on behalf of the customer and the company.

Those pursuing Internet channels have a tougher challenge, which has led many of them to be creative in how they track customer needs and apply them to building relationships. In a July 2000 study by Deloitte Touche Tohmatsu, "Creating a Competitive Advantage in the New E-conomy," they found that manufacturers who adopt consumer-centric practices to build e-relationships are 60 percent more profitable than other companies. These companies stand out for their ability to extend their enterprises to:

- Gather, interpret, and use information about their customers
- Apply the information to strengthen their brand with their end-users
- Develop strong relationships with customers based on two-way communications

Emerging Value Concepts cont.

"A manufacturer that uses e-commerce within the framework of a demand-driven model is more likely to outperform others that don't have mechanisms in place to proactively respond to the needs of online customers or to achieve procurement economies of scale."

The Internet gives suppliers the tool they need to improve buy-side and sell-side operations and meet their business objectives. On the buy-side, the Internet reduces the cost of procurement, provides high speed, low cost communications and can be used to find lower cost suppliers. On the sell-side, it provides ways to promote products, helps identify partners in new markets and invites customers to take on the cost of configuring products, placing orders and tracking order status through self-serve mechanisms. And internally, it keeps the supply chain and customer service teams up to date.

Demand-driven Opportunities and the Internet

A manufacturer that uses e-commerce within the framework of a demand-driven model is more likely to outperform others that don't have mechanisms in place to proactively respond to the needs of online customers or to achieve procurement economies of scale.

There are a number of ways a manufacturer can use the Internet to further the demand-driven model through e-commerce:

- Send and receive e-commerce transactions and transaction-related notifications and documentation between parties.
- Search and procure items online using supplier catalogs or marketplace engines.
- Provide customers access to information, visibility of orders and shipments and self-serve functions.
- Submit RFQ bids to participate in marketplace reverse auctions.
- Apply workflow logic to extend the enterprise by connecting internal systems and external Internet service provider systems to create new types of "value chains" between business partners.

In addition, fulfillment cost savings and enhanced customer satisfaction can be achieved through self-serve inquiry and visibility of orders and shipment status. These also act as revenue builders and add another dimension to the buy/sell arena.

Those that have integrated functions and centralized capabilities to achieve strategic, demand-driven fulfillment objectives are able to negotiate better contract terms, consolidate requisitioning for greater price breaks and work with customers more cost effectively.

Emerging Value Concepts cont.

"Companies are employing auto-confirmation by e-mail, and the more progressive are applying SYSPRO e.net solutions to easily extend and integrate their enterprises, creating real-time electronic information exchange with customers and suppliers."

Supply Chain Communications

The demand-driven model requires superior supply chain communications and in-depth visibility. The Achilles' heel of most enterprise relationships is poor communications. Despite growing use of EDI in a number of industries and wide interest in a low cost Internet-based version of EDI, the majority of companies still communicate via phone, fax and postal mail. These methods are slow and fail to keep people on both sides of the equation informed well enough to build trust in the data. Instead buyers wonder if the shipment will arrive on time and complete, and sellers wonder what last minute changes will wreck havoc on their production and warehousing operations. To overcome these problems, companies are employing auto-confirmation by e-mail, and the more progressive are applying SYSPRO e.net solutions to easily extend and integrate their enterprises, creating real-time electronic information exchange with customers and suppliers. In addition, SYSPRO e.net solutions, a component-based architecture, provides a highly cost-effective way for SYSPRO customers to integrate other best-of-breed applications, maximize business-to-business trading and leverage wireless connectivity, all necessities for achieving a successful demand-driven model.

Management Control and Organizational Structures

Today, manufactures are discovering that support of the demand-driven model requires logistics and supply chain activities to be organized under one executive to remove barriers and improve organizational decision-making and responsiveness. Without cross-functional supply chain and customer service teams, a fully integrated system is more lip service than reality. The right hand needs to know what the left hand is doing and what is the impact or result of their actions and decisions. Cross-functional information must be available at a moment's notice to best serve the customer, while meeting corporate objectives. The need becomes even greater for manufacturers with multi-site operations.

Emerging Value Concepts cont.

"Successful demand-driven manufacturers have worked hard to extend their enterprises by integrating functions through new processes and supply-chain wide systems."

Cross Functional Information Access

Successful demand-driven manufacturers have worked hard to extend their enterprises by integrating functions through new processes and supply-chain wide systems. However, this process is now being made easier with SYSPRO e.net solutions, which enables browser-based access to dispersed internal systems and wireless access for mobile personnel, suppliers and customers.

Customers want more options and are demanding last minute changes to their orders, which is challenging and costly to suppliers and their channels. To address these market forces and to create better fulfillment strategies designed to meet these demands, manufacturers are working on several extension initiatives. They include engineering-driven product configurations, coordination of contracts, projects and order management, advances in supply chain planning and production practices and greater visibility of order and shipment status. These are crucial elements of a demand-driven model and an extended, integrated enterprise system to give manufacturers greater control in the way customers and suppliers interact with them and in how they respond.

Flexible Product Design

Whether building industrial and consumer products or mixing ingredients for consumable or intermediate products, the trend is make-to-order configured goods and packaging. For many suppliers, the introduction of configured products has provided new ways of fulfilling the demand-driven concept and retaining competitiveness without price cuts in standard products or without the high cost of engineering involvement in complex products. In addition, configured products simplify order entry and improve the ability to effectively schedule production and delivery to meet customer requirements. Configured items also facilitate the shift towards demand-driven strategies needed to support mass customization and Internet consumers.

Emerging Value Concepts cont.

"These SYSPRO modules exemplify how software can support the "lean" manufacturing concept by shifting quality processes to the order desk while facilitating factory throughput."

By placing product configuration at the order desk, a manufacturer can speed deliveries and facilitate customer satisfaction. For example, the SYSPRO Product Configurator enables non-technical order personnel to configure products based on customer requirement. Since the Product Configurator is rules-based, only compatible parts can be used to configure the demanded products. The Product Configurator can also play another important role in building revenues. By including sales terms, conditions and prompts for add-on sales, the Configurator allows the order taker to add related products to incoming orders.

SYSPRO Engineering Change Control software enables customers to order "older" versions of products without placing the burden on the factory. With the ability to access records of the engineering changes made to products, as well as what iterations the customer had ordered previously, the order desk is able to enter orders for the appropriate and proper versions without disrupting factory operations.

These SYSPRO modules exemplify how software can support the "lean" manufacturing concept by shifting quality processes to the order desk while facilitating factory throughput. The result is that customers are assured of product accuracy, and returns are minimized.

Cohesive Project/Contract/Order Management

Many companies struggle to successfully coordinate the functions of order fulfillment, post-delivery services and contract administration. As a result, they can not ensure that customers and channels get what they ask for or that changes in the contract or product will be shared with other departments. This is even more challenging with long-term projects under contract, demonstrated by the high number of manufacturers that fail to meet their deadlines or to keep costs under control. A more strategic approach is to integrate these functions into one extended information infrastructure, so that engineering, product configuration, purchasing, manufacturing planning, project management, budgeting, costing, billing and finance, and customer relationship management are working off the same page, populated with the latest data. A real-time enterprise solution, such as that offered by SYSPRO, is the key to successful coordination. SYSPRO CRM gives insight into customers and contractual obligations, so there's never any guesswork.

Emerging Value Concepts cont.

"To address these needs and reduce the costs of greater customer demands, order fulfillment strategies need to integrate supply chain execution functions and to design flexibility into their processes."

Fulfillment Coordination

The actual fulfillment of the order also has to be coordinated across many groups - both internal and external. This necessitates collaboration along the supply chain, and it starts with order taking and promising, then picking and packing, followed by shipping and tracking, and ends with billing.

In recent years, this process has become more complicated as customers ask for smaller shipments, to-order configurations, last minute changes and same-or-next day delivery options. To address these needs and reduce the costs of greater customer demands, order fulfillment strategies need to integrate supply chain execution functions and to design flexibility into their processes. Flexibility is needed in the way orders are taken, the options customers may choose, how and when products are shipped, how products are sourced and delivered, how customers track or change their orders and how they are billed. Many of these issues affect distributed resources across physical and logical sites. They can include remote production sites, distribution centers, wholesalers, carriers, brokers and suppliers. Therefore, to have effective extended enterprise solutions, these operations need to be integrated through multi-site engineering change, production and distribution functions. Then manufacturers can control the fulfillment process according to the most cost-effective and efficient approach that best serves their company and customers. The challenge is to employ an enterprise solution, such as SYSPRO, that readily supports multi-site operations.

Emerging Value Concepts cont.

"The most successful manufacturers, of course, are those able to meet customer delivery schedules while maintaining inventories at minimum levels."

Inventory Optimization

Optimal inventory planning is vital to the success of any manufacturing operation based on the demand-driven model. The most successful manufacturers, of course, are those able to meet customer delivery schedules while maintaining inventories at minimum levels. To do this, suppliers need accurate inventory visibility across physical or logical locations. Once they have confidence in that data, they can stop overcompensating for inbound delivery problems with excess inventory, or they can ship from multiple warehouses without keeping all finished good items in each location. In addition, sales people can be confident in their ability to quote more accurate promise dates. Once the order has shipped, customers want the ability to track its shipment status.

According to Managing Automation Magazine, "To succeed as a manufacturing leader in today's competitive business climate, it's not enough to be lean and efficient. As always, progressive manufacturers need to create a structure for getting products to market faster at less cost, with systems in place to keep inventories low."

Demand-driven manufacturing necessitates a more tightly integrated approach that closely reflects the dynamics of the extended supply chain and promotes the imminent availability of data for consumption by other business application modules within the ERP system. Where business processes and transaction capabilities are integrated and extended across the supply chain, visibility into the different aspects of inventory optimization must be enabled for use by a greater number of users across the enterprise and the commerce ecosystem to meet the requirements of a "lean", demand-driven manufacturing model.

For example, the SYSPRO Inventory Optimizer is an application suite that is intended to deliver the required functionality in a manner that is complimentary and integral to the core SYSPRO system. This integration enables the Inventory Optimizer to leverage on the broad and stable base functionality and business logic already inherent and distributed throughout the SYSPRO system. The Optimizer suite includes a sophisticated forecasting module that leverages available history to forecast future sales. Predefined algorithms or a Competition method can be selected wherein the system will use the mathematical formula best suited to an item's historical sales. Dynamic analyses, approval workflow, tabular and graphical reports enable easy analysis, reference and the ability to streamline and optimize inventory forecasting.

Emerging Value Concepts cont.

"Visibility of shipments is now possible with the integration of parcel carrier systems to supplier systems and SYSPRO e.net solutions-based access."

From a broad perspective, implementation of the SYSPRO Inventory Optimizer enables demand-driven manufacturers to target the longer term objective of including Inbound and Outbound Logistics together with Warehouse Management to raise the overall level of automation and awareness of the entire supply chain.

For customers already deploying extended enterprise strategies, the technologies provided by SYSPRO e.net solutions will enable extended value to be extracted from the SYSPRO Inventory Optimizer as it delivers the outward facing technologies required to facilitate "lean" manufacturing principles. The SYSPRO Inventory Optimizer takes a holistic view of the extended supply chain in a context of the extended enterprise.

Visibility of shipments is now possible with the integration of parcel carrier systems to supplier systems and SYSPRO e.net solutions-based access. Equally important to status visibility is notification of problems as they arise using a workflow and notification process, such as SYSPRO Business Alerts, so that plans can be changed where necessary and customers can be notified quickly.

Many companies find themselves working within the constraints of inflexible information architectures and incompatible business systems. Today, SYSPRO e.net solutions-based systems make it easy for them to extend their enterprises – to change the way they do business or access information they need to get strategic control of their operations. In today's dynamic business climate, manufacturers need to improve their fulfillment capabilities and responsiveness, so that they aren't responding to customer requirements at their own expense. Advances in information technology are making the extended enterprise possible. The Internet is also opening up communication channels, providing cost-effective links between organizations, and reducing the time it takes to get information. While not all companies are ready to do a substantial portion of their business on the Internet, many are turning to the Internet to support their strategic operations. The Internet is not a requirement to the extended enterprise and demand-driven fulfillment practices, but it does pave the way to more cost-effective and efficient fulfillment results.

Emerging Value Concepts cont.

"Demand-driven manufacturers are growing, consolidating, divesting, and extending their operations to reduce cumbersome and costly value addeds and extend lean performance."

Flexible Operations

Demand-driven manufacturers are growing, consolidating, divesting, and extending their operations to reduce cumbersome and costly value addeds and extend lean performance. They accomplish this through highly flexible and scalable software systems, such as SYSPRO, that enable them to take advantage of strategic opportunities and strengthen their competitiveness to gain greater market share and improve process flows. Equally as important, the system must enable the management team to view the company (and supply chain) as an extended enterprise while also providing the ability to gain real-time insight into each operation of the company (and supply chain.) SYSPRO e.net solutions is enabling the next generation of manufacturers and distributors to be outward facing by providing the ability to exchange real-time data with suppliers and customers.

Highly modular and configurable systems, such as SYSPRO, also avoid the need for source code changes, while providing organizations with a wide range of operational process options. For example, SYSPRO supports common business capabilities that are the cornerstone of the "lean" manufacturing concept, such as bar coding, EDI, RFID, and document management.

Emerging Value Concepts cont.

"Growing manufacturers and distributors, especially, need a sound financial system that accommodates growth and change and is fully integrated to all other enterprise applications."

Integrated Financials & Costing

The heart of any manufacturing system is a solid accounting application. Growing manufacturers and distributors, especially, need a sound financial system that accommodates growth and change and is fully integrated to all other enterprise applications. Companies are in business to earn profits. Strategic fulfillment decisions revolve around how they will affect the company's profitability - now and in the future. Specifically these decisions impact revenues, material costs, labor costs, outsourcing decisions and ultimately the bottom line, so it's important that those making the decisions have the most accurate and current figures to guide them. In multi-entity or multi-site organizations, people need access to information that crosses these sites and rolls up from these organizations. They also need to "drill down" into divisional, regional, or geographic operations to understand what is going on and what needs to be done to get them back on track.

For example, SYSPRO financial reporting options help manufacturers develop user-definable reports that can provide added insight into the operation as well as graphical performance reports that show the actual versus the projected performance or actual versus past performance. SYSPRO even provides an "Executive Dashboard" which enables authorized members of the management team to call up a graphical view of the entire company. A drill-down enables the manager to view details.

Emerging Value Concepts cont.

"SYSPRO Advanced Planning and Scheduling (APS) provides the necessary manufacturing operations flexibility that's the very heart of the lean, demand-driven concept."

Ease of Data Access and Rapid Response

Extended enterprise decisions result in action items that must be made available swiftly and in a comprehensive manner to suppliers, resellers and even to the markets they serve. Therefore, companies need the means to easily access data maintained in their enterprise systems in order to interface with other systems or share it with partners and virtual operations. SYSPRO e.net solutions facilitates the extension of the enterprise via the XML exchange of information between similar and dissimilar systems, the exchange of documents on the Web and the development, execution and management of distributed business processes.

In addition, SYSPRO Advanced Planning and Scheduling (APS) provides the necessary manufacturing operations flexibility that's the very heart of the lean, demand-driven concept. SYSPRO APS controls and monitors all aspects of a modern factory, *including* quality.

SYSPRO APS enables a plant manager to efficiently schedule production to maximize the use of workers and machinery to meet promised order delivery dates. In effect, SYSPRO APS merges the benefits of an Advanced Planning and Scheduling system with the important elements of a Manufacturing Execution System (MES). It brings "realism" to the "perfect" world of ERP, which does not consider the real time changing capacity of plant resources. Moreover, the SYSPRO APS "what if" capability enables the plant manager to view the consequences of any proposed production changes.

SYSPRO APS enables the creation of realistic finite capacity schedules, making this a highly useful enterprise business tool. It lets all involved personnel see when and how the production plan will be achieved. It enables Sales, Logistics, the Shop Floor and Accounting to interact in real-time. In this manner, sales personnel can offer accurate lead times; Logistics can plan on-time deliveries; and the Shop Floor can make accurate and attainable commitments.

Furthermore, SYSPRO APS has the ability to monitor quality related to a machine, a product or even a customer. This quality monitoring capability integrates the recording of quality parameters with the recording of progress data. Quality items to be recorded are user-defined and may be related to a machine, a product, customer or collected upon manual selection. The collected data is stored in a database, which can be queried directly or brought into an analysis tool.

Emerging Value Concepts cont.

"SYSPRO makes it is possible for manufacturers to employ a demand-driven strategy to lower inventories, reduce operating costs, maximize revenues and customer service and increase return on assets and overall profitability."

The Quality Monitoring capability also enables instant checks for trends and "blips" in the collected data and can be configured to send warnings to other users when processes are going out of tolerance. "Lean" manufacturing is only sustainable is quality is maintained.

The SYSPRO Enterprise Solution

SYSPRO has worked with suppliers across many industries and understands the struggle many companies face to make profitable decisions in the heat of daily fire fighting. It isn't easy for people to see beyond their own functional environments and objectives, yet their myopia very often creates chaos and unnecessary costs and delays in other departments, organizations and partner companies. Added to these internal issues are the constant demands coming from customers to do more for less. It is no wonder that manufacturers feel like the tail of the dog being whipped back and forth. SYSPRO makes it is possible for manufacturers to employ a demand-driven strategy to lower inventories, reduce operating costs, maximize revenues and customer service and increase return on assets and overall profitability.

By providing exacting controls and insight into manufacturing operations and financial performance, SYSPRO software provides the "lean" foundation that underlies the successful demand-driven manufacturing model. By enabling an extended enterprise, SYSPRO also facilitates the necessary supply collaboration that is a must for such a model to be successful.

Furthermore, business intelligence tools, such as SYSPRO Business Analytics, empower a company to gain greater insight into operations. With the ability to automatically create OLAP cubes for drill down into existing data to discern patterns and develop reports that reflect each user's specific information needs, Business Analytics is a powerful tool that lets a business analyze the dimensions and indicators on which demand-driven success is measured.

Summary

"SYSPRO software provides the flexibility, openness, visibility, planning, e-commerce, collaboration and integration attributes necessary to ensure the success of demand-driven manufacturing model."

Summary

Manufacturers are being continually forced to seek new ways to compete successfully on global, national and regional playing fields while remaining profitable. Many manufacturers have found that a demand-driven model is the answer. However, the execution of a demand-driven model requires a software system that supports and facilitates such a model. SYSPRO software provides the flexibility, openness, visibility, planning, e-commerce, collaboration and integration attributes necessary to ensure the success of demand-driven manufacturing model.

A move to a "lean" and demand-driven manufacturing environment necessitates a re-thinking of business processes and the better utilization of all available assets. This is necessary to ensure that greater efficiency and control are applied over processes in order to streamline them. The objective must be centered on eliminating waste and optimizing resources.

The ideal time to achieve this objective is during the implementation of new software. For example, the SYSPRO STARS (Structured Technique to Achieve a Rapid Solution) Implementation Methodology provides a structured, business-centric vehicle to guide implementers in all aspects of the implementation of SYSPRO software. But, more importantly, it provides a framework by which business practices can be examined and re-energized to maximize overall operational efficiency – the first step in executing a successful "lean" manufacturing and demand-driven model.

The SYSPRO approach provides the extended infrastructure needed to sustain the demand-driven manufacturing model, meeting the information needs for management to make strategic operational decisions, meet customer expectations and achieve corporate objectives.

For more detailed information about SYSPRO enterprise software, call (800) 369-8649 or visit our website at www.syspro.com.

Glossary of Terms

Advanced Planning & Scheduling:
The ability to obtain a “live” picture of the shop floor in order to plan workloads against available capacity to accommodate rush shipments, broken equipment and absentee workers.

Collaborative Planning, Forecasting and Replenishment:
The sharing of information along the supply chain to enable finite adjustments to forecasts and replenishment needs.

Demand-Driven Manufacturing:
Building products in response to the pull of the marketplace, rather than building to stock and creating a demand for the products.

Executive Dashboards:
A means by which authorized individuals can obtain meaningful business metrics to obtain an overall “picture” of the company’s current health with the ability to “drill-down” for visibility into specific areas.

Inventory Optimization:
The use of historical data and sophisticated algorithms to forecast future sales in order to minimize the investments in raw materials and finished goods inventories.

Lean Manufacturing:
Reducing order turnaround times by eliminating non-value-added waste in the production stream. The ideal of a lean system is to reduce inventories of raw materials to a supply sufficient to meet current orders.

Supply Chain:
The various processes and services involved in securing raw materials, converting them into products and distributing the products to the final consumer.

XML:
eXtensible Markup Language is the universal format for structured documents and data on the Web.

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