

Gaining Confidence: Syncing Supplier Delivery to Customer Demand InSync Solutions Paper | 3

CHALLENGES ADDRESSED:

- The link between supply and demand can be complex and confusing
- Reducing reliability on costly and faulty forecasting
- Customer service and delivery problems



Contents

1 | Overview of Pull-Based Manufacturing

1 | Partner with Your Customers to Optimize Pull (Demand) Signals and Reduce the Reliance on Forecasts

4 | The Happy Customer: Demand-Driven Manufacturing's 5-Star Rating

5 | The Reliable and Predictable Supplier: Connected and Confident

7 | Summary

8 | About Synchrono and the Authors



Overview of Pull-Based Manufacturing

Enterprise executives and Supply Chain Managers are confident that demand-driven manufacturing is achieving the promised results. It can mark a sea change in their culture, demanding unprecedented transparency along each point of the supply chain and a focus on the customer that results in a real competitive advantage, so they are striving to implement it in their organizations around the world.

In this series of four educational papers, we lay the foundation for why Pullbased manufacturing supports "lean" thinking and outline the principles driving operations to succeed. The first two papers, *Gaining Control: Exploring Push v Pull Manufacturing* and *Gaining Clarity: Drive Productivity, Flow and Profit with Data that Matters*, introduce the essential operational building blocks and transition points of Pull-based manufacturing. In this third paper, we will discuss how demand-driven concepts take "lean" outside the four walls of the manufacturing operation to bring a forward-looking perspective. We discuss the confidence gained by the customer and supplier when Pullbased manufacturing principles are present; creating a new vision that reaches beyond today's deliverables in order to reduce a heavy reliance on forecasting.

Partner with Your Customers to Optimize Pull (Demand) Signals and Reduce the Reliance on Forecasts

Many businesses overlook the vital contribution that careful inventory management makes to the profitability of the company. Of course, it can be difficult and risky to react solely to customer orders; most industries employ some combination of building to forecast and delivering to order. As we discussed in our first white paper, ERP and MRP systems tend to rely heavily on forecast inputs to drive production planning and execution systems. Many manufacturers must employ some sort of finished-goods warehouse to ensure they can deliver orders to customers in a timely fashion.



The answer is to develop inventory management systems that improve information, flexibility and quality. Demand-driven manufacturers strive to streamline production in this way. These manufacturers design their replenishment processes in an agile and lean manner, so as to be responsive to customer needs (orders) and engender confidence in their customers.

Demand-Driven Manufacturers:





Tracking pull signals in real-time allows for complete visibility and an attendant control of resources, saving money and time. One of the largest factors in any replenishment/stock sizing calculation is projected demand over lead time. Demand-driven manufacturers are able to drastically reduce lead times. Every day of replenishment lead time represents an additional day of relying solely on forecast. So, for every day reduction in replenishment lead time, there is a corresponding day's reduction in reliance on forecast.

The Pull graphic below begins with the customers' needs. Each discrete pull signal triggers a discrete replenishment from the customer through the supply chain to the supplier. The result is a well aligned, confident partnership between customer and manufacturer. Tracking these pull signals in real-time, moreover, allows the company complete visibility and an attendant control of its resources, saving money and time.



The Pull Replenishment Process



According to the Manufacturing Advisory Service in the UK – and based on a study of thousands of projects - the average delivery performance that came from a lean, demand-driven vendor improved by 26%.

How many angry customers would be happy and how many rushed shipments would be avoided if you were able to achieve similar results?

The objective of the Pull model is to minimize excess inventory and optimize supply while emphasizing speed, responsiveness and on-time delivery.

The Happy Customer: Demand-Driven Manufacturing's 5-Star Rating

Demand-driven manufacturers who practice lean manufacturing create happy and confident customers - offering improved delivery performance, faster development, and better quality performance - with fewer defects and rework. There is no happier customer than one who gets what they want, when they want it, and at a reasonable price!

As we indicated above, the objective of the Pull model is to minimize excess inventory and optimize supply while emphasizing speed, responsiveness and on-time delivery. The Pull model is a response to growing uncertainty in demand as well as short product cycles. The primary characteristics and benefits of this model include:

1. **Proactive demand management** - Volatile fluctuations in demand were traditionally buffered with inventory and capacity. A streamlined Pull system can respond to fluctuations in demand by using real-time data and alert systems to respond to any fluctuations. Thus, the changes can be managed more proactively – and cost effectively.

2. **High rate of customization** – Pull-based manufacturers have learned to hold inventory only in the "generic" state and move all the options to the end of the production cycle. This allows for the more efficient "customize-on-demand" production method.

3. **Minimal inventory carrying** – Since inventory is posted as an asset on the books, companies must plan for inventory reductions so as not to appear to be losing assets. This may require a one-time reduction of the asset base and must be carefully planned with investors. Companies can optimize inventory held in finished goods warehouses, reducing risk of inventory obsolescence.



4. **Highly dynamic and effective distribution network** – With Pull rather than Push production, manufacturers gain the ability to take on more capacity. If they cut batch sizes, and fill truckloads of mixed shipments of inventory to eliminate expediting orders and cross shipping, while

also eliminating the storage of unneeded parts (an always expensive undertaking) they benefit the entire supply chain with a better mix of product.

5. Alleviate customer service and/or delivery issues – These problems can challenge a company's brand reputation. Conversely, a reputation for reliability helps secure your position in the marketplace and can bring you more opportunities. Customers are very happy when they believe you have jumped through hoops to get them their product!

6. **Ability to take on more work** – Without surges of orders, manufacturing capacity designed to handle peaks is available to produce the consistently higher sales resulting from a Pull supply chain.

7. **Competitive pricing** – Value is gained through the entire supply chain by reducing waste and costs. This allows companies to offer products or services at the right selling price to retain or gain customers.

The Reliable and Predictable Supplier: Connected and Confident

How would you rate your current suppliers and supplier agreements? Are you constantly challenging your supplier base over cost and delivery issues? If you are like many companies, your suppliers can help you decrease inventory and increase your quality and flexibility with deliveries. If there are issues with both communications and expediting orders, you can minimize this if they are Pull-based manufacturers. If so, you can have a greater degree of confidence that they will be a good partner.



There are three major benefits received by suppliers in a Pull-based model:

1. By acting on actual demand, statistical variations are decreased rather than magnified, steadying on-hand inventory levels at every stocking location. There is a very nice consequence of less fluctuation in on-hand levels. The lower limits of the on-hand fluctuations are similar to those in a Push system, fixed by the need to hold prudent safety stocks. However, in Pull systems, there is less variation on the high side, resulting in significantly lower average inventory. Whether you have a large existing supply base or are setting up new suppliers, all parties will be better connected and more confident to the degree that you are using demand-driven principles.

 Everyone wins with greater visibility and real-time information.
Communication is greatly improved. A supplier in a Pull-based manufacturing system benefits from electronic orders that are automatically generated, saving time and money. For example, when 70 percent of their purchase orders were fully automated, Sonic Manufacturing experienced enhanced workflow and a more efficient materials management system.
(Source: "Factories of the Future: Building Fast Moving, Highly Automated Future Factories and Plants," Frost and Sullivan, page 7)

3. A Pull system reduces the burden on buyers, freeing them to work on more strategic sourcing activities. Suppliers will spend much less time changing and maintaining POs and can become more proactive vs. reactive in their relationships with their customers. With a Pull system, they can immediately realize the effects of changes in demand because communication of demand is in the form of actual daily customer consumption, which tends to be quite steady at the manufacturer level - the point of highest aggregation. Suppliers also like that they are viewed as a partner when incoming calls are constructive instead of placating, pleading, begging, or yelling.

A supplier in a Pullbased manufacturing system benefits from electronic orders that are automatically generated, saving time and money.



- syn	cka	nban												
ecubion					- Administration									
Search: Item Nor Search	r Pe	xanbar Xanbar	n Card NDI Blanket PO		Kenben Status 👦	Open 🛛	Shipped Consumed							
Drivy n Cálumn hva	idar her	sa georgeby that sou	ann.							1 martine		_		
12J	Sta	Consumption V Pct	Rem Mor	Flant Name	Kanben Card Mar	Kanban Qty	Required Date	Capable Date	Entry Date	Confirmation Date	Supply Type	Spike Card	Kanban Status	Elenket F
Edi Ship		100%	518519	Boston	B000354	200	7/22/2012	7/22/2012	7/12/2012		Buy.	Folse	Open	105288
Edit Stip		33%	822218	Boston	8000327	250	7/2/2012	7/1/2012	6/21/2012	7/2/2012	Biq	Fille	Open	105290
Edit Ship		0%6	22311	Boston	B000322	250	6/29/2012	6/29/2012	6/19/2012	6/29/2012	Bay	False	Open	109583
Edd Ship		0%	22311	Boston	8000334	250	7/6/2012	7/6/2012	6/26/2012		BJY	False	Open	109583
Edit Ship		D%s	518519	Boston	B000355	200	7/22/2012	7/22/2012	7/12/2012	7/23/2012	Buy	False	Open	105268

Supplier Portal

A supplier portal is also crucial because it can facilitate communications in realtime and allow both parties to achieve a high level of confidence as they proactively coordinate orders and reorders. Such portals include a "dashboard" element, allowing all parties to prioritize their activities based on real-time data. This level of collaboration and transparency can make a huge difference in the supplier relationship and creates an environment of empowered change that can impact each company's bottom line.

Summary

Customers and suppliers are more confident when they partner with demanddriven manufacturers. Demand-driven concepts take "lean" outside the four walls of the manufacturing operation to bring a forward-looking perspective that looks beyond today's deliverables while simultaneously reducing the heavy reliance on forecasting.

Demand-driven and lean production allows manufacturers to be more responsive to consumer needs while increasing their own profitability. Customers demonstrate their confidence by eliminating buffers, linking demand

Takeaways:

- 1. Smart manufacturers extend Lean benefits outside the walls of their operations.
- 2. Customers find great benefits in proactive demand management.
- 3. Everyone wins with greater visibility to real-time information.



Confidence and a collaborative spirit can be infused into the suppliermanufacturer relationship, generating streamlined communications and a win-win mentality for enhanced efficiency. signals and providing real-time data directly to their suppliers while reducing their reliance on forecasts. This works to build lasting client relationships by ensuring customer service that exceeds expectations and drives results.

Thanks to the demand-driven model and the resulting improvements in communication, additional confidence and a collaborative spirit can also be infused into the supplier-manufacturer relationship, generating streamlined communications and a win-win mentality for enhanced efficiency.

The results can be a stunning improvement in both productivity and financial performance. The next paper in our series will discuss the competitive advantage gained from using Pull-based production methods and demand-driven replenishment.

About Synchrono and the Authors

Synchrono[®] LLC is a leading provider of demand-driven manufacturing software and services that simplify complex manufacturing environments and transforms business results. The company's planning, scheduling and execution, and eKanban inventory replenishment software are powerful on their own, and when combined with its operations systems under the Synchrono Demand-Driven Manufacturing Platform, clients synchronize their workforce, methods, machines, resources, information and more to enable flow from order inception through production and delivery. Aggregating information from its own applications as well as from both machine-level and disparate enterprise systems, the Synchrono Demand-Driven Manufacturing Platform provides a real-time visual information system that empowers everyone - from the top floor to the shop floor - with actionable information.

Synchrono helps clients manage constraints, improve flow, drive on-time delivery and maintain a competitive edge. Look to Synchrono for software that meets your demand. Sync with us at www.synchrono.com.



About SyncKanban

SyncKanban software from Synchrono keeps instantaneous supply chain signals moving through your organization at lightning speed. This automated, Pull-based inventory replenishment system sends signals to suppliers to deliver materials, helping to reduce the costs and waste associated with excess inventory and replenishment process administration. For many, that means up to a 50% reduction in inventories, on-time production, improved cash flow and a distinct competitive advantage. See for yourself – try SyncKanban for free at www.synchrono.com.

John Maher

John Maher has more than 20 years of experience working in manufacturing environments and has been with Synchrono since the company's inception. John's subject matter expertise in ERP, MRP, APS, supply chain, manufacturing planning and scheduling systems and constraints management drives continuous refinement of the company's Lean and constraints managementbased software and services. John is responsible for providing strategic direction for the Synchrono product roadmap and oversees the technology and delivery functions within the organization.

John earned his BBA in production/operations management from University of Wisconsin, Whitewater, and an MBA from the University of Minnesota, Carlson School of Management. He has APICS CPIM certification in production and inventory management and Jonah certification in Theory of Constraints from the Goldratt Institute.

Rick Denison

Rick Denison is a software implementation consultant in Minneapolis/St. Paul, Minnesota. He is an operations and logistics professional with applied knowledge and hands-on experience in leading change in companies through Lean manufacturing, Six Sigma, and TOC techniques. This experience has been obtained through 25 years leading industrial operations in industry and



consulting in a diverse range of manufacturing environments and products. Rick has a strong background in process improvement, change management, project management, information systems implementation, and profitability analysis. He currently serves as a Senior Implementation Consultant at Synchrono Manufacturing Software.