

Lisa Anderson's *Profit Through People*[®] Newsletter



Enabling Scalable, Profitable Growth No 191, May 2023

As our inaugural newsletter from LMA Consulting's founding in 2005, Profit through People remains our flagship brand because although most clients call us because of our manufacturing, supply chain and technology expertise, the 80/20 of success goes straight to people!

Lisa's Note

I'm excited to share my favorite photo from my combined work-fun trip to Europe (Finland, Estonia, UK, and France). This was taken a few feet from the cabin/ igloo in the Arctic Circle, Finland, and it is my favorite because it is simply picturesque.



In case you missed it, I'm thrilled that our book, *SIOP* (Sales Inventory Operations Planning): Creating Revenue and EBITDA Growth, has been published on [Amazon](#) (paperback, Kindle) and [iTunes](#). We have a special [free download](#) for our newsletter subscribers. We just ask that you add a review on [Amazon](#) if you gain value from it. I'd love to hear your feedback, and our Amazon ratings would benefit!

Unfortunately, my Mom's cat, Blossom passed away 2.5 months after we adopted her (although beat the doctor's estimate by 25%). I ended up finding another cat (Sam) and drove him to her (after making sure she didn't have feline leukemia). My Mom now adores him although he is a bit of a trouble maker. He is friendly and loves everyone, and so he has won the household over. And, he is in good health (thank goodness). Aside from a scare over my Mom's deadly plants (for cats), he is doing well.

From a business standpoint, we are excited to see customer service and operational performance (increased output, improved efficiencies, reduced cost & inventory) results for clients with the rollout of planning, scheduling, inventory, [SIOP/ S&OP](#) and other projects related to better utilizing ERP and related technologies to improve performance.

IN THE NEWS

I was thrilled to be interviewed by *Interlinks podcast* on our new book, *SIOP (Sales Inventory Operations Planning): Creating Predictable Revenue and EBITDA Growth*. Listen to Part 1 [here](#).

And for the rest:

- Quoted in a special report, [Forging a Crisis-Proof Supply Chain: The Rise of a More Innovative, More Resilient industry](#)
- Keynoted a *Vision 33* event on "The Future of the Supply Chain Thriving into 2024". See the recording [here](#).

- Spoke on "The Status of Healthcare Supply Chains" in a [ProVisors](#) affinity group for healthcare advisors.
- Published an article in *Brushware* on "[Manufacturing Opportunities in e-Commerce](#)"
- Published an article, "[Proactive Approach to Navigating Transportation Woes](#)" in *Adhesives & Sealants Industry* magazine.
- Excited to be on the [Lou Desmond radio show](#), an ABC affiliate, about the geo-political issues and impacts on supply chain.
- Contributed the logistics viewpoint to a *New York Times* article, "[As Warehouses Multiply, Some Cities Say: Enough](#)". Be careful about what you read on this hot topic. If you don't want warehouses near you yet you want Amazon deliveries, less traffic and pollution and high employment levels, you have unrealistic expectations and a conundrum.
- Quoted in a SAC press release, "[It's Not Whether to Integrate AI-But When, Where, and How](#)"
- Published a press release, "[Lisa Anderson, Manufacturing & Supply Chain Expert Sees SIOP Process Critical to Tumultuous Times](#)"
- Our press releases were picked up by [Supply Chain Quarterly](#), [Today's Medical Developments](#), [Quality Digest](#), and [Southern California CEO](#).

Enjoy,
Lisa

P.S. Know anyone who is interested in getting ahead of stagflation complications to thrive in 2023 and 2024? Refer them to [us](#).

The **STRONGEST LINK** in Your Supply Chain™



STRATEGY

SIOP / S&OP: Balance Customer Orders, Inventory, & Profitability



Why Balance Customer Orders, Inventory, & Profitability?

If you want to serve your key customers successfully (with high on-time-in-full (OTIF), short lead times, and proactive service) so that you can take advantage of the opportunities coming down the pike while addressing the hard realities of the current business environment (potential recessions, high interest rates, and less access to capital), you MUST balance sales, operations and inventory.

Otherwise, you will have one or more of the following issues arise:

- **Inventory Overload:** Too much inventory of the wrong products and WIP (work-in-process) in the wrong place at the wrong time.
- **Slow Moving Inventory:** Too much slow moving or obsolete inventory
- **Production Schedule Disruptions:** Not enough of the right inventory in the right place to keep production running smoothly.
- **Weak Service:** Not high enough service levels to ensure you can maintain and grow your business during turbulent times, let alone meet business plans
- **Not Prepared for Growth:** Not able to take on significant opportunities coming down the pike. For example, as companies expand manufacturing in North America, customer orders continue to increase down-the-line in the supply chain
- **Skyrocketing costs:** If you aren't balanced, you have to spend more to meet customer objectives.
- **Inflation cost increases:** The only way to offset the massive cost increases related to inflation is to be able to get in front of what's coming.

Instead of these dire consequences, the smart are proactively balancing customer orders, inventory and profitability.

How Do You Balance Sales, Inventory & Operations?

The good news and bad news is that balancing these factors does not require significant capital investments, the latest technologies like ChatGPT, and a mountain of resources. It simply requires rolling out the appropriate strategy and tactics that is uncommon common sense. Roll out the appropriate strategic processes largely encompassed with [Sales Inventory & Operations Planning \(SIOP\)](#), also known as S&OP, processes. Focus solely on achieving directional progress, and you'll gain quick wins.

However, strategy alone will not "work". It has to be accompanied with the appropriate tactics which is the execution of the fundamentals required to support Sales & Operations Execution (S&OE). If you aren't familiar with S&OE, don't fret. It is a common term in software circles, but in manufacturing and supply chain circles, it is known as demand planning/ forecasting, supply planning (master scheduling, production planning, material planning, replenishment planning, inventory planning, production & labor scheduling, etc.), operational execution, shipping, receiving, etc.

Client Examples: Using SIOP / S&OP To Balance Sales, Inventory & Operations

The SIOP process is geared to aligning sales with operations, customers with suppliers, and demand with supply.

How SIOP Fueled Growth for a Biotech Manufacturer

For example, a biotech manufacturing client couldn't meet aggressive sales goals with high enough service levels to ensure customer loyalty and future growth. Sales was frustrated and executives were concerned about how to support future growth goals. On the other hand, Operations didn't have the information to prepare in advance to meet the service objectives with the aggressive goal goals. They were concerned about spending money until they knew the product wouldn't go to waste, and management was concerned about hiring manufacturing employees until volumes were confirmed in enough detail to know the work centers and skills required. The bottom line: Sales was out of balance with Operations. Thus, the right inventory was not available in the right place at the right time.

After rolling out SIOP in combination with S&OE (as you cannot have one without the other), we developed a directionally correct sales forecast by geography, product and unit of measure that "added up" to the growth goals (in dollars) in a way that made sense when viewing by customer, product groupings and growth rates. Simultaneously, we focused attention on understanding capacity (production requirements vs. available capacity by key work area and equipment). It quickly became clear that we had to reallocate a few resources to the bottleneck operation, and we gained approval to hire a few people to support the growth plans. Once the bottleneck

operation smoothed out, we gained efficiencies in down-the-line operations, and most importantly, customer service improved and customers gained confidence. Sales, Operations and Purchasing also had insights that enabled cost reductions, product rationalization plans, and key pricing decisions. Nice side benefits to the aggressive growth goals!

How SIOP Accelerated Cash Flow & Reduced Debt by Increasing Inventory Turns

In another example, an aerospace manufacturer had turned the company around following the 9/11 downturn and was interested in selling the business. Thus, they wanted to maintain their excellent service levels while maintaining/ improving profitability and reducing unnecessary debt. We had to balance sales with operations and inventory to reduce unnecessary inventory (not required to support service, spikes in sales and predictable disruptions in supply) while focusing on operational performance. Thus, we assigned executive leadership to the topic to emphasize the priority, clarified the sales plans, and focused attention on inventory planning processes (again, the combination of SIOP/ S&OP and S&OE).

In this case, we had to balance profitability/ margins by site with customer orders and inventory plans. We rolled out improved business processes, better utilized the ERP system, provided training and education to the inventory teams, and we aligned the goals of the Site Leaders with corporate objectives and the Inventory Leaders. Inventory levels came down by 30% in key product lines while maintaining/ improving service levels and growing the business. The company was also better positioned for sale and for continuing operations so that no matter which path was chosen, the company was in a healthy, robust position.

Path Forward

SIOP can be an important process in aligning people (within your organization and with your supply chain partners) and processes (demand and supply) to improve service, support growth, reduce debt, accelerate cash flow, and improve profitability. During times of volatility (inflation, recession, stagflation, technological advances, talent shortage), there will be more opportunities for those companies prepared for success. The winners will be separated from the losers and opportunities will abound. SIOP requires focus, but it doesn't require capital intensive investments. There is no downside to becoming more profitable, having greater access to cash, and better serving customers and preparing for growth.

Refer to our [SIOP webpage](#) for more information, our [blog](#) (SIOP category) for hundreds of articles, and learn more about SIOP and what's important for a successful implementation in our new release eBook, [SIOP \(Sales Inventory Operations Planning\): Creating Predictable Revenue and EBITDA Growth](#). If you are interested in talking about how to improve profitability, free up cash, and/or improve service, [contact us](#).

[Did you like this article? Continue reading on this topic: SIOP/ S&OP Playbook: Creating Predictability & EBITDA Growth](#)

Interlinks Podcast: Sales Inventory & Operations Planning (SIOP) Part 1

Podcast on how implementing SIOP supports profitable growth as well as many other business objectives.



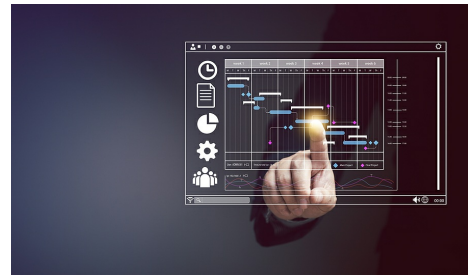
Patrick Daly

Interlinks

podcast

PLANNING

Scheduling Best Practices to Improve Customer Service, Operational Performance & Inventory Turns



Does Production Scheduling Matter?

The best companies focus on production scheduling. Even though Production Schedulers aren't typically highly paid positions, the function will make or break your ability to serve customers, improve operational performance and accelerate cash flow. Thus, it should be a key priority if you want to achieve profitable growth.

Are There Best Practices for Production Scheduling?

Yes, there are best practice concepts for [production planning](#) and [production scheduling](#). No matter the client, industry, and people, these concepts "work". On the other hand, each situation is unique, and so the key to success is to tailor to the different set of circumstances and priorities at each client. For example, there are different people, processes, ERP systems, data sets, customer requirements, and more. The best way to determine your best path forward is to relate to different examples and determine which tools and skills best apply to your situation.

Client Example: Succeeding in Process Manufacturing with Production Scheduling

In an absorbent healthcare products manufacturing company, product started as materials at one end of the production line, was converted into an absorbent healthcare product and was packaged at the end of the line. All things considered, it was a simple process with one step. And, so why was production scheduling important? Depending on the production schedule, downtime, waste, and inefficiencies increased - or decreased. To increase output, better serve customers, and reduce stock levels (of both raw materials and finished goods), we had to schedule the fewest significant changeovers, sequence items in the most efficient order, and ensure the appropriate resources and support were available at key junctures. This optimized production, but didn't address customer orders. Thus, we also had to balance operational needs with the appropriate inventory levels and sequencing of customer orders to meet customer needs while also optimizing production. After rolling out best practice production scheduling practices, we won awards from customers, improved operational performance, and reduced inventory levels, freeing up cash flow to invest elsewhere.

Client Example: Succeeding in Job Shop Manufacturing with Production Scheduling

In an industrial manufacturing company of storage solutions, there were multiple steps in the production process from fabrication to weld to paint and assembly. Although it sounds obvious, you need to have product available from the step prior before you can start the next step; however, in these types of companies, marrying up parts that go together in the next step operation is often an issue. There is no point in having 1 piece ready if you need all parts for the

next operation. Thus, production scheduling must focus on clarifying the customer requirements and backwards scheduling the operational steps. Once you have this base schedule, the key to success often relies on scheduling certain material types together and sizes together. In this client, labor scheduling is also a critical priority to understand which work centers are scheduled to run on which shifts (and days) so that backward scheduling can ensure the correct parts are available at the "right" time. Otherwise, you have too much WIP (work-in-process) inventory and are chasing your tail to keep product flowing. Once a clear schedule was achieved, the fabrication schedule became visible, and production output immediately increased. Next, items could be optimally sequenced to further increase efficiencies and provide visibility to sales of product availability, thereby improving service levels.

Client Example: Succeeding with Kanbans with Production Scheduling

In a building products (piping) manufacturer, there was a combination of process and job shop steps to the production scheduling process. In this situation, we utilized Kanbans to pull product through the operation steps. During the busy season, we'd add Kanban cards and pull product through the process steps quicker. In this situation, the key was to level load the shop and ensure we kept enough resources to support production on a quarterly basis. We developed a high and low number of employees required to support the quarterly volume, and so long as we maintained these employees and/or reliable temporary resources, our Kanban system would meet customer orders in the most efficient way possible. The ERP system was important in supporting the production scheduling process by driving the backend (Kanban sizes, number of cards and barcoding) as well as providing capacity reporting by work cell which translated back to the demand plan. Results followed. They were able to respond more quickly to spikes in demand with higher service levels and were able to minimize costs by level loading production and minimizing spikes/ troughs in operational resources.

What's In Common No Matter the Consulting Client?

There are a few items in common across the board for every successful production schedule. A few supporting factors that pop to mind include:

- **Production scheduler(s):** You need a well-rounded resource who is excited about optimizing several conflicting priorities as balancing sales, inventory, and operations is not a good fit for the a person who likes black and white assignments.
- **ERP system tools:** Whether it is MRP (material requirements planning), advanced planning systems, MPS (master planning), or a report showing orders, inventory, changeover groups, and more, you will need to use your ERP system to create a solid schedule. In 90%+ of our consulting projects, we expand the use of ERP and utilize advanced functionality to improve the process.
- **Operational data & information:** It is impossible to schedule effectively if you don't understand your capacity. How many people are required to run certain machines and support different work cells? Do certain products require additional support? Are your people flexible to run multiple machines? Can they go across work areas? How many people do you have in total? How many shifts run which lines? Are support resources in place?
- **Customer orders / demand plan:** If you don't know what is needed to ensure high service levels, you cannot schedule effectively.
- **Training & education:** You will need to prioritize training (how to's - click here, perform the job in this sequence, etc.) and education (why are you sequencing in this order, what are your order policies and why do they matter).

Don't fret if these priorities are not in place. In 99% of our clients, they are not in place when we start. Yet most can be quickly put what's needed in place at least to the degree required to start gaining results. They are not of equal priority in every client. In fact, half the battle is determining what needs to be done in what order, who has the capabilities to jump into scheduling and thrive, how to extract directionally correct data from Operations and your ERP system, etc. What is clear is that if you focus on this priority, your customer service, operational performance and cash flow will thank you!

Final Thought

Production scheduling is cornerstone for any manufacturer as you must serve customers, maximize operational efficiencies, reduce waste, coordinate resources, right-size inventory levels, and execute plans.

Refer to our [blog](#) for many articles on production scheduling and related concepts. Also, read

more about these types of strategies in our [eBooks](#) including [SIO \(Sales Inventory Operations Planning\): Creating Predictable Revenue and EBITDA Growth](#). If you are interested in talking about implementing out best practices for production scheduling to drive cost reduction and inventory reduction while maximizing your customer experience, [contact us](#).

[Did you like this article? Continue reading on this topic: Production Planning Best Practices to Recover Capacity](#)

Clients Experience in Working With LMA

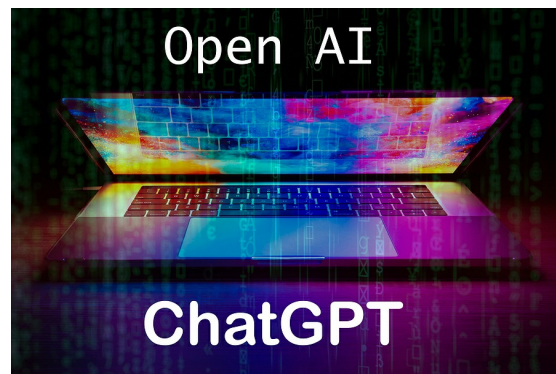
Our client Armacell talks about their experience in working together from the CEO, General Manager of Operations, Integrated Business Planning (Supply Chain), and Sales point-of-view



ERP & RELATED TECHNOLOGIES ChatGPT & AI: Good or Bad?

What is All the Hoopla Over ChatGPT?

If you haven't been living under a rock, you've heard about ChatGPT and other AI (artificial intelligence) competitors such as Google's Bard and Elon Musk's AI platform. Everyone has gotten into the conversation, from marketing professionals to tech experts to people like Elon Musk are talking about AI and how it will transform the world.....with a bit of caution throw in for good measure.



Artificial intelligence has been around for quite some time. Who doesn't own an Alexa? Even my Mom thought Alexa was the best gift she ever received as it is an easy alarm, answers questions, tells her about the weather and much more. With that said, AI has expanded far beyond Alexa in recent years.

What are the Uses of AI in Manufacturing?

There are many uses of AI in manufacturing and supply chain. According to Markets and Markets, artificial intelligence in manufacturing market size is valued at \$2.3 Billion in 2022 and anticipated to increase to \$16.3 Billion by 2027. That is a MASSIVE increase. Obviously, there is vast potential, and so you better get on board, use common sense, and determine what makes sense to support your long-term objectives. Here are a few of the common uses:

- **Predictive maintenance:** AI is used to collect data from machines and predict which will break down and what maintenance should be performed to avoid breakdowns and maximize output.
- **Demand forecasting:** AI can be used to predict future trends instead of relying solely on historical patterns. After all, historical patterns are no longer sufficient.
- **Generative design:** In engineering intensive environments, AI can be utilized to mimic the design process to quickly produce hundreds of design options for a single product. We work with several clients that could use this base once it produces a solid base.
- **Raw material pricing:** Similar to demand forecasting, AI can be used to forecast commodity prices.
- **Machine optimization:** Edge analytics uses data sets gathered from machine sensors and can provide insights on how to maximize efficiencies and minimize waste.
- **Quality controls:** AI can also monitor quality and quickly identify defects so that quality can be built into the process instead of identified later.
- **Robots:** AI robots can help eliminate the monotonous operations, reduce errors and eliminate waste.
- **Supply chain alerts:** By monitoring your end-to-end supply chain with AI, you can be alerted to supplier failures, impacts predicted and options evaluated.
- **Autonomous vehicles:** AI can be utilized to automate the factory floor, optimize deliveries, and ensure the production line continues to run.
- And many more.....

AI Uses in Logistics

Similar to manufacturing, there are a mountain of uses in logistics including the following:

- **Autonomous vehicles:** Self-driving trucks are being tested and could greatly minimize the issues associated with the shortage of drivers.
- **AI Warehouse Automation:** AI can be used to track robots, inventory, identify errors, and monitor warehouse conditions.
- **AI for visual inspection and damage detection:** AI is being used commonly to quickly and accurately identify damaged goods on a conveyor belt before they ship to a customer.
- **Predictive maintenance:** Similar to manufacturing, predictive maintenance is an improvement over preventative maintenance.
- **Delivery drones:** AI can power delivery drones that can streamline and automate the shipping process.
- **Route planning & optimization:** Why calculate thousands of potential routes manually? Instead, use AI to run through thousands of route permutations and take into account other factors such as weather, traffic, and construction to optimize your freight.
- **Data-Driven Analytics:** Use AI to track and manage the flow of goods throughout the supply chain. Identify potential issues and mitigate them before they occur.
- And many more.....

Is AI Good or Bad?

Certainly, there are many valuable uses of AI in manufacturing and supply chain. If you want to thrive, you will need to embrace AI. Of course, you cannot blindly follow artificial intelligence. Use a bit of common sense, start with practical applications that will provide immediate value with strong paybacks, and expand where it makes sense. Do not jump in and let AI take over. Instead, think about what you're doing, test the results, and expand.

There are many positive results from using AI. These include error-free processing, automation of repetitive tasks, 24/7 availability, faster decision-making, predictive capabilities etc.

On the other hand, there are drawbacks as well. One is that humans no longer have to think. That is a BIG concern if you don't maintain this ability to monitor AI etc. Big unions such as the ports are worried about unemployment. However, there is a lack of talent in today's marketplace, and it does not appear to be improving with the retirement of the baby boomer generation. In fact, more high-skilled roles will be needed with AI. On the other hand, if you aren't interested in learning and prefer repetitive tasks, your job is likely to go away. The statistics prove this worry to be false. For example, UPS put automation and AI in place in a large distribution center, and their volume increased, propelling them to hire more people. This is a common story yet there remains a LOT of controversy. Unfortunately, making the U.S. more uncompetitive vs. China's ports is not the solution as we already are manual vs. using technological advances, automation, and robotics.

Elon Musk and a group of artificial intelligence experts want to pause the development of AI.

They want to make sure the risks are mitigated and that the effects will be positive for advanced uses. For example, who wants their car to drive into a crash without the ability to stop it? This has created a lot of controversy as countries like China will not pause. It is creating quite the controversy. We need smart thinkers using common sense and collaborating to "win this technological war".

Who certifies the certifiers?

On the other hand, using ChatGPT is largely non-risky - unless you take its conclusions as accurate without verification. It will lead you down the wrong path. There are countless examples of ChatGPT predicting what likely occurred but was not based in reality. The key question is, "Who certifies the certifiers?" as my consulting mentor Alan Weiss points out. The same holds true for AI. Who programs the 'truth' into ChatGPT and the like? In fact, ChatGPT is working with 2 year old data, and so as much as it can be valuable in creating a base, do NOT run with AI/ ChatGPT to the bank. Or, you will walk out like a Silicon Valley Bank investor.

Should Manufacturers and Distributors Pursue AI?

Only if you want to stay ahead of changing market conditions in an efficient, cost effective, error-free manner!

Bring on experts and consultants. Provide training and education for your teams. Learn about AI, its uses, how it could add value in your situation, and evaluate potential business partners/ software suppliers. Take the leap with a controlled pilot. And surpass your competition! Only the technologically advanced will thrive in the next decade.

How Does AI Relate to ERP?

Modern ERP and related systems (such as advanced planning and demand planning systems) are incorporating AI. It will no longer be sufficient to struggle with an outdated ERP system. If you do not have a modern ERP system, hire an ERP selection consultant to help you find the 'right' system for your critical requirements and take the plunge to upgrade your [ERP system](#).

If you are interested in discussing how to incorporate AI and related technologies into your technology roadmap review our [ERP and technology resources](#) and/or [contact us](#) to discuss your situation.

[Did you like this article? Continue reading on this topic:](#)

[Modernize Your ERP System: A Guide for Selection & Implementation Success](#)

Listen to a Client Example

Thrilled to share our client's success story related to service, use of ERP system (SAP), and SIOP decision-making. Our client also discusses how LMA works with client teams to achieve these bottom line results, and more importantly, how we will jump into details and educate the team so that the improvements are sustainable.



Connections

THIS MONTH'S REQUESTS:

- If you have a supply chain or operations position, post it on our Association for Supply Chain Management Chapter (ASCM/ APICS) [website](#).
- Do you know a top notch investment banker or environmental attorney in the Southern California area interested in growing his/her business and meeting top-notch trusted advisor colleagues in the Inland Southern CA area? My [ProVisors](#) group has an opening for these professions, and we have lots of referrals for these professions on a regular basis. Please introduce [me](#).
- If you are looking for a highly-skilled Supply Chain Manager with planning, purchasing, and inventory experience, please [contact me](#) for a referral.

NOTE: To submit an item for this section, please send me an email with a short description of your needs and an email address. Please note that NOT all requests will be published as it must fit the guidelines and align with the Profit through People brand.

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