



**MCA**  
CONNECT

# **Your Sales Forecasts are Wrong. You Just Don't Know By How Much.**

MCA Connect Helps Equipment Manufacturers Improve  
Sales Forecast Accuracy by Overcoming the Six Challenges  
of Sales & Operations Planning

# Pain and Plan are on the Same Page in a Manufacturer's Dictionary

You know that Sales & Operations Planning makes business sense.

After all, S&OP is a powerful decision-making process that helps manufacturers balance supply and demand, right? It improves performance, optimizes production rates, reduces inventory costs, and boosts teamwork. So far, so good.

Sure, S&OP is a great idea. But for every organization, S&OP is a nightmare. Most businesses have a hard time creating a process that repeatably meets the lofty expectations that leadership expects from it.



**You're an equipment manufacturer. You face similar challenges as other discrete manufacturers...**

- 1. Fragmented Process.** Unable to effectively and repeatably reach consensus.
- 2. Capacity Shortages.** Excessive overtime is required to meet schedules.
- 3. Materials Shortages.** Wrong materials are in the wrong place at the wrong time.
- 4. Late Deliveries.** Lead to late-delivery penalties, hurting profitability and damaging customer satisfaction.
- 5. Production Priority Errors.** You produce the wrong products based on customer commitments and scheduling needs.
- 6. Supply Chain Imbalance.** You overcommit and incur penalties from suppliers when you don't meet contracted volumes. Or you under commit and scramble to cover the bases.
- 7. Suboptimal Inventory Turns.** You fail to turnover your inventory quickly enough.
- 8. Low Employee Morale.** Excessive turnover in your skilled labor force hurts morale.

**...but equipment manufacturing is different. And tougher.**

# Why S&OP is Painful for Equipment Manufacturers

Equipment manufacturing doesn't fit into the normative approach that works for most businesses.

Sure, general S&OP processes work for businesses that follow discrete manufacturing methods to produce predesigned products. But that's not you, is it? That's why general S&OP processes don't work for you. And never will.

You face six unique challenges when it comes to the battle of S&OP. These challenges relate to demand planning and supply planning.

Read on to discover which of these challenges is hindering your ability to successfully operate under your current S&OP process—and how to overcome them.

High Mix /  
Low Volume

Manufacturing  
Methodologies

Project-Based  
Manufacturing

Processes Rely  
on Resource  
Capabilities

Intensive  
Design and  
Engineering

After-Sales  
Support Over  
Extended  
Equipment  
Lifecycles

**Regardless of the industry you're in, getting positive results out of S&OP is hard work. Period.**

First, you must master a number of capabilities to address the disciplines, level of collaboration, and quality of data involved. Not easy. Then, you must be patient, since creating an S&OP process to meet basic needs takes time. And then you must spend time and resources tweaking your process, continuously improving it to reach best-of-breed status. Like we said, hard work.

# Every piece of equipment you manufacture is unique.

Non-repetitive manufacturing hinders your ability to use historical sales transactions to forecast demand at the finished item level.

### DEMAND PLANNING

## Solution

Analyze the products you have produced to meet the unique needs of a varied customer portfolio. You'll likely discover that you can group the majority of those products into a small number of categories that share common design and build attributes.

**Often, the 80/20 rule applies here.** At least 80 percent of your past sales fall within categories that represent just 20 percent of the product/project portfolio mix. If you can discern patterns of demand for just this 20 percent of past business activities, you have a good basis on which to model future demand.

# You manufacture products using one or more of these methodologies: CTO, ETO, MTO.

Sometimes they're supported by MTS/Lean at lower levels of assembly. The catch? These are non-repetitive at parent assembly levels.

### DEMAND PLANNING

## Solution

Take your S&OP modeling beyond just the end equipment. Understand the various subassemblies and components that went into the production of that final-state piece of equipment. Here you are likely to find many commonalities.

**Look especially for commonalities that pose a challenge to the supply side of the equation, such as:**

- *Long-lead-time items that extend beyond the normal fulfillment commitments that must be made to compete for a customer's business*
- *Critical goods with only one source of supply*
- *Goods/processes that exhibit repeatable issues in the quality area*

When you develop planning constructs around these key materials and subassemblies, you greatly assist in planning for these goods in advance of customer demand.

**You don't manufacture products or families of products that share extensive similarities.**

### DEMAND PLANNING

## Solution

Analyze past product production history (Challenge 1 solution). If the analysis doesn't reveal any beneficial demand patterns or useful commonalities of lower-level assemblies and components, then in all likelihood, you are purely a provider of customer-specific, custom-designed equipment solutions.

**Your improvement opportunity lies in the business tools and software you use to manage these projects.** Most project management software offers the ability to forecast materials and resource requirements as a part of the projects you are bidding on or are already actively producing on your shop floor. These forecasts for active projects are a direct source of demand planning information you can use.

In the case of projects still in a bidding cycle, massage the forecasting data to segregate the probable from the unlikely. For example, if you assign a factor to each project being bid that represents a realistic estimation of your likelihood of winning that business, then proceed with forecasted requirements for materials and resources on those highly probable projects. You'll find this especially useful when dealing with lead time scenarios for those materials and resources that extend out beyond your normal customer commitments.

# Your production processes are oriented around resource capabilities. Not products.

This impedes your production because manufacturing activities move between disparate resource centers, not along a production line.

### SUPPLY PLANNING

## Solution

Heroes exist within many equipment manufacturing organizations who use a mixture of spreadsheets, whiteboards, and a deep understanding of the production processes and equipment to come up with production plans that have a reasonable degree of certainty of being accomplishable.

Today, technology offers a different and better approach. In particular, **Advanced Planning and Scheduling software** solutions, when configured with the extensive tribal knowledge of your in-house heroes, can render capacity planning results of a similar or better quality in a fraction of the time.

This approach enables real-time modeling of various supply scenarios being considered in the demand planning side of the S&OP process. It's incredibly useful to understanding the impact that any of those possible future states may have on the capacity utilization of critical assets.



**Your products go through many iterations of design and re-engineering, even after reaching production. The stopwatch is not your friend.**

S U P P L Y   P L A N N I N G

### Solution

Equipment manufacturing is an exercise in flexibility and agility. Customer's requirements change. Engineering designs change. Vendor components change. More importantly, these dynamics surface regularly, even after production work has been released to the shop. Confusion and misdirection proliferate, meaning schedules get missed.

**One common shortcoming** found in many equipment manufacturing shops is a dependence on an informal "sneakernet" (people physically carrying information from one place to another) or overcrowded email in-boxes containing a multitude of priority messages that never get read.

Resolve this communications and actions logjam with an **Engineering Change Management solution** that not only controls the creation, approval, and release of changes amongst the engineering teams, but also brings production planning and execution personnel into the loop. You must integrate this system with the planning and execution control systems you use in production to ensure that you communicate and manage change implementation impacts and effectivity dates throughout the supply chain.



# You measure product lifecycles in decades.

DEMAND PLANNING | SUPPLY PLANNING

## Solution

Your organization must manage the technical resources and replacement parts/assemblies necessary to support your products throughout their lifecycle. These hours and materials represent another source of demand to be factored into your demand plans and managed through your supply chain.

Use these sources for the demand side of the equation:

- **Service History:** *The history generated from servicing similar pieces of equipment in the field. This is a valuable starting point to factor future requirements for both internally manufactured assemblies as well as goods purchased via the supply chain.*
- **Projected Sales:** *Projected sales of equipment can add to this baseline data, assuming you can generate a model that predicts likely servicing requirements related to either scheduled maintenance activities or the occasional break/fix event.*

- **IoT Data:** *If your equipment includes internet-connected sensor devices, gather information from the field via the Internet of Things (IoT). Use this data to view real-time information on pending or active failures. Translate this knowledge into expected demands for resources and materials that will be required to respond to those servicing activities.*

The supply side of the equation will surface in your planning systems (your MRP & CRP, for example), assuming these sources of projected demand are provided as demand inputs into the software algorithms.

# S&OP for Equipment Manufacturers is Possible. Just Not Easy.

For nearly 20 years MCA Connect has helped equipment manufacturers solve their toughest business challenges.

MCA Connect's **Sales and Operations Planning Service for Equipment Manufacturers** will increase revenue & profitability, improve customer satisfaction and keep you ahead of your competition.

Let our team of talented manufacturing experts start you on the journey of a best in class sales forecasting process.

**You know your Sales Forecasts are Wrong, You Just Don't Know by How Much. Let MCA Connect Help Make Them Right.**



## Three Essential Ingredients for a Successful S&OP Process

In today's competitive marketplace, you have no choice but to align your production with market demand. But to do that, you must get three things right—Forecasts, Strategy, Execution. Fail here, and you fail out there. That's why MCA Connect helps you with all three.



### 1. Unified Forecast

We help you create a unified demand forecast, one that has buy-in from all your concerned stakeholders.



### 2. Holistic Strategy

We help you translate your demand forecast into viable, holistic strategies that optimize your value stream from sales to supply chain to production to distribution, to support.

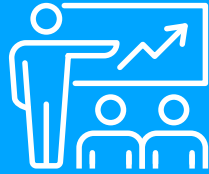


### 3. True Execution

We give your organization the tools, training & mentoring to communicate and effectively execute your plan, from executives to workers.

# Ready to Go from Pain to More Efficient Production?

Read more about our Sales and Operations Planning Service for Equipment Manufacturers to learn what's involved and how we help you succeed.



Call **866.622.0669** to talk with one of our manufacturing experts.



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