



**MCA**  
CONNECT

**AUTOMOTIVE PRODUCTION PLANNING IN A  
TIME OF SUPPLY CHAIN DISRUPTION AND  
CHANGING CUSTOMER DEMAND:**

**HOW S&OP PLANNING  
HELPS AUTOMOTIVE  
MANUFACTURERS  
ADAPT AND THRIVE**

# CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>3</b>
<b>THE PROBLEM WITH STANDARD PRODUCTION PLANNING</b>	<b>4</b>
<b>DISRUPTIONS IN AUTOMOTIVE MANUFACTURING</b>	<b>5</b>
<b>SEMICONDUCTOR CHIP SHORTAGES</b>	<b>5</b>
<b>STEEL, RUBBER AND RAW MATERIAL PRICES</b>	<b>5</b>
<b>INNOVATION</b>	<b>6</b>
<b>REGULATORY REQUIREMENTS</b>	<b>6</b>
<b>CHANGING CUSTOMER DEMAND</b>	<b>6</b>
<b>NATURAL DISASTERS</b>	<b>6</b>
<b>SHIFTING TO SALES AND OPERATIONS PLANNING (S&amp;OP)</b>	<b>7</b>
<b>BENEFITS OF S&amp;OP PLANNING</b>	<b>8</b>
<b>GET STARTED</b>	<b>9</b>

# EXECUTIVE SUMMARY

## IT'S BEEN A TOUGH YEAR.

The automotive industry has been hit hard by fallout from the pandemic, changing customer demand, and now chip shortages that are predicted to last throughout 2021 – and maybe even longer.

As a leader in manufacturing consulting, we help automotive suppliers meet these challenges head on. We start with strategy, applying world-class processes and Microsoft Cloud technology to deliver remarkable results.

In this guide, we'll show you why Sales and Operations Planning (S&OP) is becoming an essential survival tool for automotive suppliers of all sizes. We can help you stop scrambling to keep up by embracing a new way of thinking about production planning.

MCA Connect was founded on manufacturing and deeply understands the needs, challenges, and concerns facing the industry. We have a tight manufacturing focus, but a wide set of solution and service offerings.

If you have any questions about how we can help you, please reach out!

The Manufacturing Team at MCA Connect

1-866-622-0669

[Solutions@MCAConnect.com](mailto:Solutions@MCAConnect.com)

# THE PROBLEM WITH STANDARD PRODUCTION PLANNING

If you are a typical automotive manufacturer, your organization creates annual budgets and production plans. You start the process in September, end in December, and make monthly adjustments based on updated forecasts from your customers.

While that routine may work fine when business is stable, it is woefully inadequate for navigating turbulent times. Sales, production, and procurement plans get out of sync, creating inventory problems and revenue leaks. Instead of working steadily and proactively to meet company objectives, employees end up spending the majority of their time putting out fires — negotiating with suppliers, shuffling orders, and soothing concerned customers.

There is a better way, one that breaks down organizational silos and gets your teams working together. The planning process becomes a monthly drumbeat, driving the pace of production with better demand forecasting.

But before we dive into the solution, let's delve into what's causing today's greatest challenges.

# DISRUPTIONS IN AUTOMOTIVE MANUFACTURING

Lack of supply chain visibility is a common problem, but even companies with sophisticated forecasting tools couldn't predict what would happen when facing the disruption of the pandemic.

## **SEMICONDUCTOR CHIP SHORTAGES**

The greatest example of shock to the supply chain can be seen in the global semiconductor chip shortages. According to Automotive News, experts estimate this shortage will cost the auto industry over \$110 billion in lost revenue this year. No one is quite certain how long the chip shortage will last, but most predict that it will endure at least through the end of 2021.

Each new vehicle can use up to 100 of these chips. Some vehicles, like the Ford F150, are just sitting in lots, waiting. To adjust, major car manufacturers are shifting their production lines to vehicles or components less impacted by the chips, requiring their suppliers to also shift production priorities.

You may make sunroofs or mufflers, but if those components are for a make or model not in production, you must find ways to switch production to prioritize high-demand products and keep pace with customer needs.

## **STEEL, RUBBER, AND RAW MATERIAL PRICES**

You can't build an automobile without rubber or steel, but there's a global shortage of both these raw materials that's driving up prices.

Facing travel restrictions and health and safety concerns, many manufacturers shut down their plants for months to conserve costs. Labor and inventory shortages have made it difficult to easily resume operations.

The need for steel across multiple industries has dramatically driven up steel prices and created longer lead times for manufacturers needing steel. The shortage of shipping containers is creating even longer lead times.

Companies reliant on rubber are finding it hard to obtain. The combination of stockpiling in China and a rubber plant leaf disease is creating a widespread shortage.

Because it takes rubber trees seven years to mature, supply won't bounce back quickly. To preserve profitability, companies need to pass down increased costs and lead times with as much advance notice as possible.

## **INNOVATION**

Alternative fuels. Self-driving cars. Artificial intelligence and big data. With every new innovation, auto manufacturers have the opportunity to gain market share. For auto suppliers, the question is whether to pursue these new opportunities.

How much risk are you willing to take for how much reward? You need to develop these plans long into the future and balance them with taking care of current customers and building replacement parts.

## **REGULATORY REQUIREMENTS**

Big swings in regulation can create pressure for automotive suppliers. Global trade agreements like NAFTA, Brexit, and the Trans-Pacific Partnership (TPP) can create uncertainty and headaches around duty rates and import/export requirements. State requirements to lower carbon emissions can determine which types of cars consumers buy and sell.

Regulations can change almost overnight, impacting thousands of individual suppliers. Automaker suppliers who can quickly adjust will be better able to survive these disruptions.

## **CHANGING CUSTOMER DEMAND**

People expect to be able to buy whatever they need when they need it. The average consumer doesn't think about the steps it takes to keep the right inventory stocked at all times. They expect to go to a car dealership and buy the make and model of the car they want. They want to go online and pick their car's colors and features.

Demand changes across geographies. In some countries, fewer consumers are buying cars, opting instead for shared car services like ZipCar, Uber and, Lyft. In other areas, customers are choosing hybrid and electric models. Staying attuned to consumer buying trends can help you make decisions on what products to build.

## **NATURAL DISASTERS**

While the pandemic was hopefully a once in a lifetime event, natural disasters happen all the time. Earthquakes, wildfires, and even human error can create unexpected disruptions in the supply chain. Toyota, whose production planning systems have been replicated all over the world, found themselves nearly crippled in the aftermath of the 2011 earthquake and tsunami. Heavy dependency on the same suppliers or suppliers in the same geographic area can create risk.

# SHIFTING TO SALES AND OPERATIONS PLANNING (S&OP)

To face these challenges, automotive suppliers need ways to mitigate risk and maximize opportunities by building flexibility into the demand forecasting process.

Sales and Operations Planning (S&OP) is a way to reduce organizational silos and use real-time data to keep demand forecasts regularly updated. By aligning forecast numbers across finance, sales, marketing, procurement, and production, the organization becomes more agile and can respond in ways that will create the best financial outcome.

S&OP creates an operating rhythm that happens on a monthly basis. An example of a simplified S&OP process would be:

**WEEK 1: COLLECT ALL THE POSSIBLE DEMANDS.** Represent all departments by talking to different customers, looking at historical reports, and importing data from different systems and services. After collecting the different demand numbers for comparison, the group develops recommendations for each part.

**WEEK 2: PASS DOWN NUMBERS TO THE OPERATIONS GROUP.** This group then determines how much inventory the company needs and recommends whether the organization should build or buy this inventory.

**WEEK 3: HAND DEMAND FORECAST OFF TO THE FINANCE TEAM.** This team runs various "what if" scenarios to project company revenues, costs, and margins.

**WEEK 4: SEND AGGREGATED REPORT TO MANAGEMENT.** Executives then have a chance to accept, revise, or reject the teams' recommendations. In most cases, when the process is running smoothly, the executive team will accept or slightly revise the group's proposal.

**THE COMPANY EXECUTES THIS PLAN AND THE S&OP TEAM REPEATS THE CYCLE.**

# BENEFITS OF S&OP PLANNING

S&OP is no longer just for “the big guys.” Mid-sized automotive manufacturers are seeing dramatic improvements in their ability to:

- **Create accurate demand forecasts**
- **Reach organizational consensus for production and revenue numbers**
- **Respond quickly to risks and opportunities to maximize revenue**
- **Create accountability through greater transparency**
- **Right-size their inventory**
- **Improve relationships with suppliers and customers**
- **Become more proactive, which improves employee morale by reducing the stress created by constant “firefighting.”**



---

# GET STARTED

---

There is a reason MCA Connect earns repeated recognition as a top manufacturing consulting group. Manufacturing is in our blood. We take pride in consistently delivering innovative solutions – like S&OP - that save manufacturers millions of dollars.

## ENGAGEMENTS CAN START AT ANY STAGE.

- Helping your executive team define strategic improvements
- Getting started with S&OP
- Optimizing processes
- Implementing technology like Dynamics 365, Power BI, or other applications that support your company's agility
- Providing ongoing services and support to continue to optimize your operations

**Ready to Get Started?**

**Schedule an Introductory Meeting Today.**

**[www.MCAConnect.com](http://www.MCAConnect.com)**

1-866-622-0669

**[Solutions@MCAConnect.com](mailto:Solutions@MCAConnect.com)**