

Spreadsheets **vs.** Supply Chain Planning Software

Why spreadsheets won't relieve the five
biggest supply chain planning headaches

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Headache #1: The Need to Improve Forecast Accuracy



Unless your supply chain and product line are very simple, spreadsheets simply can't produce an accurate forecast—for two big reasons:

- Spreadsheets aren't designed for collaboration. When spreadsheets are being emailed among departments, it's hard to ascertain which is the most current version. And it's usually impossible to know exactly who changed which values, when.
- Spreadsheets are prone to error, and the larger the data set—and the number of people providing input—the greater the risk of errors becomes

// A Better Approach to Forecast Accuracy

Dedicated supply chain planning systems are built for collaboration, and designed to provide everyone in the organization with a “single version of the truth.” Planners spend more time strategically improving inputs and much less on last-minute changes and fire fighting.

Because there is less manual effort required and no need to email multiple spreadsheets between people, it's much easier to have timely information available. Cloud-based supply chain systems make it easy and secure to collect input from suppliers and channel partners. And systems that utilize artificial intelligence (AI) and machine learning (ML) technologies “learn” from past experience to produce more accurate forecasts over time.

Headache #2: The Need to Improve Service Levels (Product Availability)

One challenge in meeting high service level targets using spreadsheets is simply their nature: they are designed to do calculations, to give one result based on a set of values and mathematical operations. They aren't designed for modeling or what-if scenarios, or managing uncertainty and probabilities. Planning is reduced to a "single number" forecast, which rarely matches reality.

They also can't automatically adjust forecasts for fast versus slow-moving items or rapidly adapt to changing demand. The result is often shortages of the best-selling items combined with excess inventory of the slow movers. You get the worst of both worlds: high carrying costs and missed sales opportunities.

// A Better Approach to Meeting Service Levels

Cloud-based supply chain software specifically built around the concept of "service-level planning" is designed to accommodate the fact you may not want or need to target the same service level for every product in every location.

Look for systems that employ advanced algorithms and/or machine learning and probabilistic forecasting techniques. Instead of a single-number forecast, probabilistic forecasting identifies the range of possible outcomes, one of which is the most likely.

In addition, uncertainty modeling provides the ability to better handle slow-moving inventory and intermittent demand patterns which are becoming more common due to product line extensions, part proliferation and rapid replenishment cycles.



Headache #3: The Need to Reduce the Costs of Excess and Obsolete Inventory

When supply chain pains include low forecast accuracy and high service level targets, too often the remedy applied is to simply order more safety stock. At a minimum, this leaves companies with too much cash tied up in inventory. Worse, it increases the risk that stock will become obsolete, go out of style or spoil.

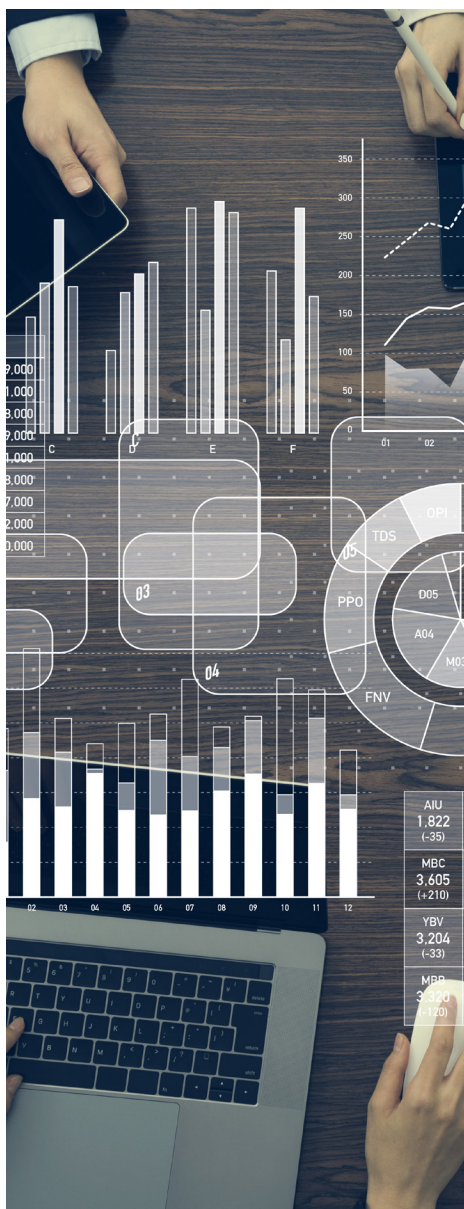
One significant shortcoming of planning in spreadsheets is timeliness. When planners have to rely on multiple people updating and passing around multiple spreadsheets, they simply can't react quickly to changing conditions, and risk making decisions based on "yesterday's news."

// A Better Approach to Reducing Overall Inventory Levels

With cloud-based supply chain systems, you simply provide historical demand data and the ML-powered forecasting engine analyzes sales trends by item and location, applies the best-fit forecasting method, and delivers the most accurate forecast. It takes into account target service levels as well as constraints such as lead time, minimum order quantity, and order intervals. The result is improved service levels with lower overall stock levels.

You can also get ahead of lots that are at risk and avoid overplanning stock by understanding the inventory you have and when it will expire. A more accurate forecast results in producing the right amount of goods to avoid sell-off or spoilage. Next-gen inventory optimization defines an inventory mix that takes into account shelf life to maximize freshness and minimize risk of obsolescence—while meeting service levels.





Headache #4: The Need to Automate Demand and Inventory Planning

While certain functions within spreadsheets can be “automated” with macros and formulas, most updating and collaboration efforts are manual. Planners are forced to spend excessive time on data entry and dealing with the effects of the inevitable errors through expediting and fire fighting.

The result is that planners are overworked and stressed out while simultaneously being unproductive. And trying to grow the company through higher sales volume or an expanded product line only compounds these problems.

// A Better Approach to Supply Chain Planning Automation

Digital supply chain planning software is designed to automate planning processes and support management by exception workflows by finding the “needle in the haystack” for you. This way, automated planning systems ensure your planners can be more productive at the strategy level instead of spending time doing “grunt work” and putting out fires.

Machine learning-augmented forecasting allows supply chain models to “learn” from existing data and accurately identify future demand trends. It leverages the knowledge, experience, and skills of planners and other experts in a highly efficient way, working like an intelligent assistant that helps them do their normal jobs much more effectively. Planners are less stressed out, and able to focus on strategy and process improvements while the software does the math.

Headache #5: The Need for Seamless Integration with ERP and Other Systems

Not only does reliance on spreadsheets mean juggling multiple files and dealing with manual errors and information silos, it also raises issues of data reliability and security—particularly when external suppliers or channel partners need to be involved. Per Nucleus Research, “a myriad of circulating spreadsheets that contain critical business information is difficult to maintain in addition to posing a significant risk to organizational integrity.”¹

// A Better Approach to Supply Chain Integration

Look for digital supply chain planning software that uses a single, unified model for forecasting and inventory optimization. These systems eliminate information silos and create an end-to-end process that minimizes expediting, scales easily, and provides deep insight into demand signals, inventory behaviors and supply chain volatility.

This type of solution integrates with ERP, manufacturing execution, transportation management, and other systems so that everyone in the organization is working with the same data. This integration provides several benefits:

- Data accuracy, integrity and security are all improved.
- Manual processes are eliminated, which both reduces errors and increases productivity.
- Information is always current, enabling the business to respond quickly to demand changes or new opportunities.
- Revenue growth is supported, not constrained.
- Operations run more smoothly and efficiently, since the forecast is more stable.

Supply chain planning software also allows you to easily set user permissions to access data by groups, such as country or region or role. This way, everyone has exactly the right information at the right level of detail.

	JANUARY	FEBRUARY	MARCH	2019 APRIL	MAY	JUNE
1	\$212.50	\$176.00	\$187.00	\$215.00	\$202.47	\$4
2	\$192.25	\$281.80	\$309.98	\$386.48	\$484.81	\$8
3	\$478.36	\$382.89	\$420.95	\$484.10	\$608.38	\$9
4	\$656.44	\$525.15	\$577.67	\$664.50	\$828.47	\$1
5	\$325.41	\$420.33	\$462.36	\$533.71	\$723.13	\$1
6	\$417.11	\$333.69	\$367.86	\$412.34	\$524.08	\$340.08
7	\$469.25	\$375.80	\$412.34	\$473.36	\$585.54	\$445.54
8	\$236.52	\$189.22	\$205.14	\$229.36	\$282.53	\$225.53
9	\$471.58	\$377.26	\$414.99	\$477.36	\$585.54	\$445.54
10	\$796.32	\$637.06	\$700.76	\$805.89	\$1,005.99	\$795.47
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Digital Supply Chain Planning for Companies of Every Size

In a world that rarely follows the rules, ToolsGroup's digital planning solutions help companies of every size reach or exceed service levels while optimizing inventory—no matter how complex your supply chain is or how much demand changes.

For mid-sized and large enterprises that need a full digital supply chain planning solution...The Service Optimizer 99+ (SO99+) service-driven supply chain planning suite uses advanced analytics and automation to guarantee service to demanding customers in highly complex supply chains. **See SO99's full set of service-driven planning solutions**

⁽¹⁾ Nucleus Research: Beyond Excel in Supply Chain Planning, Aug 2019, Seth Lippincott

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