



Aptean Food & Beverage ERP

Best Practices for Supply Chain Management in the **Food and Beverage Manufacturing Industry**

Ideal approaches to demand forecasting, anticipated lead times, safety stock, and order cycles





Safety, efficiency and growth—these three concerns are shared by all food and beverage manufacturers, regardless of their specific industry. Considering the number of different processes, materials and partners that these businesses deal with, though, excelling across the board can seem like a nearly insurmountable challenge.

What if there was one aspect of your operations that you could address and achieve results in all of these areas? It's not too good to be true—safety, efficiency and growth can all be enhanced with effective, information-driven supply chain management.

To realize full control over your supply chain, you'll need to:

- › Ensure reliability of demand forecasts
- › Use historical data to inform anticipated lead time
- › Create and maintain an order cycle with attention to seasonal, cost and market changes
- › Utilize software to attain precision and dependability

Cooperation, Communication and Accurate Calculations

By its definition, the supply chain relies upon relationships between suppliers, vendors and customers. Thus, it follows that collaboration and transparency between the involved parties is necessary if everyone is to accomplish their goals.

Temporary, inconsistent or unpredictable changes in demand can muddy the waters, potentially resulting in the production of excess inventory, suboptimal use of equipment and staff and lost revenue. Therefore, accurate projections and the clear communication thereof will be at the heart of supply chain success.

This includes:

- › Demand forecasts
- › Anticipated lead times
- › Safety stock quantities

What are the best methods for calculating your figures? Let's dig deeper into each.



What if there was one aspect of your operations that you could address and achieve results in all of these areas? It's not too good to be true—safety, efficiency and growth can all be enhanced with effective, information-driven supply chain management.

Demand Forecasting Best Practices

Past sales and usage history are typically good indicators of future demand, but changes in customer base, product popularity, competitive alternatives and one-time promotions also must be taken into account if the numbers are to be relied upon.

Collaborative planning, forecasting and replenishment (CPFR)—which is accomplished through providers and retailers sharing actual or projected sales, production schedules or other pertinent estimates—is a great way for supply chain partners to synergize their efforts and achieve greater efficiency and profitability.

Technology makes all this much easier, as retail point of sale (POS) and manufacturing data can be automatically relayed to the interested parties. Regardless of whether this step can be automated, though, the following are necessary steps to take to implement CPFR effectively:

- › Identify partners that can predict their future sales or use
- › Establish a preventive maintenance module to ensure proper upkeep of equipment and facilities
- › Compare customers' usage estimates to actual purchases on a monthly basis
- › Report results to clients to help them improve future projections

Customers have a tendency to overestimate their needs, so consider offering a better discount based on the accuracy of the estimates. Still, your business shouldn't rely on their figures alone—so keep in mind these five key elements of accurate demand forecasting:

- › Past usage of the product (excluding usage that results from CPFR information)
- › Trends of increasing or decreasing popularity
- › Seasonality that affects demand
- › Upcoming promotions or events
- › Industry and marketing knowledge from sales, management and other sources

With these elements accounted for, your “total forecast” will be the sum of collaborative projections from certain customers, and a simple formula can be employed:

Absolute value of (usage – forecast) / Smaller of the forecast or actual usage

Now that you have some numbers, pay close attention to those that indicate a large margin of error for the forecast (50% or greater). Then, ask yourself: Was the usage affected by activity that probably will not reoccur in the future, or is this the start of a new sales trend?

When the answer to both of those questions is “no,” that means you need greater accuracy in your forecasts, and you may need to address this with your customers to put a more reliable method in place.



Anticipated Lead Times Best Practices

Another element that needs to be carefully calculated is the time it takes to fulfill replenishment orders. These anticipated lead times give you a realistic idea of how long it will take to restock your inventories from the time that you identify that more of a material is necessary to continue operations.

A formula that factors in current consumption and anticipated lead time can inform your ordering procedures. But that second variable can be complicated—it's actually comprised of four elements:

- › The time it takes to place an order
- › The time it takes the vendor to process and ship the order
- › The time the materials are in transit
- › The time it takes for your business to prepare the stock for sale

An industry-specific enterprise resource planning (ERP) solution can help you keep track of these metrics and relieve the burden of manual record-keeping from your employees. You'll have complete visibility from the beginning of the supply chain to the end, allowing you to gain critical insights.

Make sure to keep suppliers in the loop when you notice that your anticipated lead times are either 50% less or more than the actual values or more than a week early or late. In those instances, it will be important to determine whether this occurrence was an outlier or actually reflects a change that needs to be factored into your expectations going forward.

Again, it's all about good communication between business partners and finding the best fits.

Safety Stock Best Practices

Even if you follow all of these steps for accurate forecasting, keep in mind that these are just estimates. Sometimes, your best guess will still be off the mark—but that's why you keep an adequate safety stock.

How much inventory needs to be held in order to prevent inopportune shortages?

That, of course, will depend upon your processes, products and sales, but you can begin to circle in on these numbers by basing the calculation on the average deviation or difference between the forecast and actual usage, as well as the average deviation between anticipated and actual lead times.

Items with more unpredictable usage and lead times will require higher safety stock quantities, while the consistent performers can deal with having less. Remember that keeping more than you need results in a drain on your resources and the risk that some of your products may expire before they can be sold, so the time and effort it takes to derive accurate requirements is well worth it.



Make clear to your vendors what's working and what's not when it comes to your ordering and try to find compromises that allow you to get the most out of your ingredients, machinery and employees.

Order Cycles

Once you've put in place reliable methods for finding the above values, you can employ this formula to calculate your order points:

$$\text{(Demand/day x anticipated lead time) + safety stock}$$

This will show you the number of days until the next order needs to be placed, but keep in mind that different vendors have different target order requirements. If you want to take advantage of bulk discounts and make the most of your purchases, ask your suppliers how they price purchases based on:

- › Quantity (number of pieces or cartons)
- › Monetary value
- › Total weight or cubic volume

In general, longer vendor order cycles will result in your business having to purchase more than you actually need, as you'll be forced to order more of all materials that are below their order point every time the cycle comes around or otherwise face shortages. And on the other side, if you can only meet the vendor's target requirements once every 30 days, then you'll always have to order at least a 30-day supply, regardless of your actual usage, which increases waste.

This is another instance in which good transparency between business partners can result in good results for all. Make clear to your vendors what's working and what's not when it comes to your ordering and try to find compromises that allow you to get the most out of your ingredients, machinery and employees.

Addressing Everyone's Needs

Try to view each of the businesses in your supply chain as members of a team, and the path from raw ingredient to consumer-ready product as one process. This isn't a zero-sum operation—all parties can get what they want and enjoy successful operations with good communication, clear and accurate data and reliable forecasting.

Aptean Food & Beverage ERP is the kind of purpose-built solution your food and beverage business needs to accomplish all of these vital forecasts and calculations. By integrating all of your departments and eliminating data silos, everyone has the data they need at a moment's notice, keeping your operations agile and accurate.



Are You Ready to Learn More?

Interested to see how Aptean Food & Beverage ERP can help you better manage your food company?

Contact us at info@aptean.com or visit www.aptean.com.



About Aptean

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