

# Alteryx for Inventory Management

Data science and analytics made easier, faster, scalable, and actionable



## 4 Ways Analytics can Augment your Inventory Planning

Whether you're in retail, manufacturing, healthcare, banking, or another sector, driving efficiencies with inventory planning is a key strategy for cutting supply chain costs. Although many organizations use inventory management software to optimize their inventories, most inventory software is no match for the diversity of data and unique business conditions your organization deals with every day.

Running an efficient inventory system is no longer just looking inside your supply chain to draw out cost savings; to modernize your perspective, you must account for multiple internal and external factors that can impact your inventory. Information such as customer demand forecast, warehouse locations with driving distances, collaborative shipping costs, seasonal influence, and even customer sentiment must be taken into consideration to effectively optimize your inventory.

Alteryx empowers analysts, managers, directors, and all users of supply chain data to move beyond data formatting and into critical data analysis. When doing supply chain planning, harnessing the power of data analytics can give you results you need to meet your strategic goals. Let's look at four factors you should consider when looking to gain meaningful insights from your inventory data.

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### THE ALTERYX PLATFORM

- Improves the efficiency, transparency, and accuracy of analysis across the organization
- Delivers both a code-free and code-friendly environment for business analysts and data scientists
- Empowers organizations to build a culture of data science and analytics across departments and skillsets

## 5 Myths About Demand Forecasting

- 1 If it's on paper, it must be true.
- 2 An average of past usage is a good enough forecasting formula (and buyers/planners don't need to know it).
- 3 Only one formula is needed to calculate demand for all products.
- 4 Feedback loops to verify if forecasts were correct aren't practical.
- 5 Reliable customer demand predictions aren't possible.

### ALTERYX PLATFORM REQUIREMENTS

For a complete list of system requirements and supported data sources, visit

[www.alteryx.com/platform](http://www.alteryx.com/platform)

## 1 Data Prepping and Architecture

Most companies are working with enormous volumes of data, which in many cases are located in multiple systems and different formats. Using Inventory Management Software to help manage and optimize your inventory depends on the data being clean and structured in order to calculate correctly the optimization. With Alteryx, supply chain planners can quickly blend a variety of data in any format from spreadsheets to text, transforming a process that can take weeks into one that can take minutes.

The data structure you build in Alteryx can be automated and ingested into most inventory management software. Data can be displayed by SKU, BOM, or assortment category.

In addition, many planners will want to augment the data. For example, adding spatial coordinates to visualize inventory locations and calculate drive times can help you gain insights on how to best fulfill customer delivery expectations. Alteryx is preloaded with TomTom, Experian, and U.S. Census datasets, and third-party data is easily brought in to be blended and cleaned for analysis.



## 2 Accurate Demand Forecasting

Forecasting demand is a critical factor in your organization's continued growth and success, but many organizations rely too heavily on their inventory management software to spit out pre-programmed forecasts that look primarily at past usage across large swaths of products. Catapult your organization into the best-in-class category in these five areas of demand prediction and planning with Alteryx:



## How Amway moved from monthly supply chain reporting to daily insights

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**Demand forecasting:** Organizations with a strong demand forecasting process do not just look at historical sales activity. They also incorporate more forward-looking signals, such as sales forecasts or marketing plans, as well as downstream demand data, such as retail point of sale or channel sales data. This data, however, is often incomplete and difficult to match. Alteryx allows planners to blend data from various extraction sources such as marketing and retail point of sale and match them in order to create a more accurate forecast.

**Demand planning:** Companies can improve their demand planning process by increasing the frequency of forecasts, which will lead to using more accurate and timely data. In addition, to decide on a consensus demand plan, members of sales and operations planning (S&OP) teams should assess multiple forecasts. With Alteryx, you can run several demand forecasting models and evaluate against actuals, and then automate the process to run as needed.

**Demand sensing:** Real-time “sensing” of demand has replaced demand forecasts that are based on rules, particularly in the business-to-consumer world. A sure way to modernize and move from forecasting to sensing is to start combining external data that can help “sense” customer sentiment. Alteryx provides a web scraping capability that allow planners to collect and use customer sentiment to “sense” potential product demands.

**Demand shaping:** Demand shaping includes programs and capabilities such as price management, new product launches, and promotions to increase demand or profitability for products and services. Alteryx allows companies to A/B test and validate promotional assumptions before launching a new incentive or price reduction. Having the ability to validate customer sentiment and the potential impact on inventory can shape the promotion to be more effective to manage inventory conditions such as overstock or stock-outs.

**Demand fulfillment:** Companies are increasingly realizing that they need to differentiate their demand fulfillment processes to serve different combinations of products, customers, and channels. Alteryx can help analyze and optimize fulfillment best practices such as decreasing routing time, increasing on-time shipment and maintaining carrier cost.

*[Gartner: “Five Tenets of Demand Management Are Foundational to Supply Chain Transformation”](#)*

How one American retail chain improved parcel routing by **83%** while decreasing shipping cost by **11%**

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## 3 Inventory Visibility and Movability

Being able to locate your product by SKU and understand how long it takes for the product to get from point A to point B allows a planner and buyer to consider not only the cost, but also the time to move the product. Moving stale inventory to other locations where performance better is a great way to manage your cycle stock. With Alteryx, you can manage your stock and quickly understand reorder points. In addition, because Alteryx can augment your data with spatial coordinates, you can quickly visualize your stock locations and understand distance and transportation time to move your stock where it is best used.



## 4 'Just in Time' Safety Stock

There are many ways to calculate safety stock, and many companies hold safety stock for two major reasons: customer satisfaction and in order to fulfill a specific customer's contract. Both of these cases can contribute an additional 5 to 9% to inventory hold costs, which diminishes your net margins. Many third-party inventory optimization software has fixed business rules that calculate safety stock. These fixed rules don't account for your unique business, your level of risk, or the profile of your customers.

With Alteryx you can choose and compare how you want to calculate your safety stock to see which model is more accurate. Here are three considerations:

**The outdated way: fixed safety stock:** Companies set a fixed level of safety stock for their goods. This number may be based on the judgment of the operations manager or on assumed stock level calculations. It's often set on an



How **Dairy Queen** served up an automated workflow to track fresh produce across **4,500** franchises in case of a recall.

aggregated level and not on individual items. This method may lead to high inventory costs or stock-outs since demand is not always constant or similar for all the items in the group for which the aggregation is done.



#### **The less-outdated way: time based calculation:**

Time-based safety stock level is used to calculate the stock required over a fixed period. In addition to the cycle stock, usually a percentage or a week's average sales is added. This method also has a drawback, particularly when items are slow-moving, as there is no connection to lead-time. It can result in a large amount of unnecessary capital tied up in safety stock, which becomes excess stock sitting in warehouses. In other words, your safety stock becomes your overstock.

#### **The modern way: statistical calculation:**

The mathematical approach, which uses mathematical theories of probability, imposes order and regularity on aggregates of more or less disparate elements. Several drag-and-drop predictive tools in Alteryx, such as statistical models Monaco and Gaussian equations, allow you to better predict safety stock levels on an individual SKU basis and account for.

While inventory management is complex, gathering, prepping, blending, analyzing, and auditing your data shouldn't be. When you leverage Alteryx to gain insights into your supply chain processes such as managing inventory, you will improve the accuracy, speed, and performance of your supply chain. Find out more today at [www.alteryx.com](http://www.alteryx.com).

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#### **ABOUT ALTERYX**

As a global leader in analytic process automation (APA), Alteryx unifies analytics, data science and business process automation in one, end-to-end platform to accelerate digital transformation. Organizations of all sizes, all over the world, rely on the Alteryx Analytic Process Automation Platform to deliver high-impact business outcomes and the rapid upskilling of their modern workforce.

[alteryx.com](http://alteryx.com)

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