

3 Game Changing Forecasting Strategies



Mastering
Wholesale
Inventory





What is inventory forecasting?

Inventory forecasting is a vital, continuous process that helps you gauge future demand to optimise your stock levels.

By blending historical sales data, market trends, and many other relevant factors, the process estimates the quantity of items that will be required for a specific period. This enables you to strike the right balance between having sufficient inventory to meet customer demand and avoiding overstock situations that can lead to unnecessary holding costs and waste.





Why is accurate inventory forecasting critical for wholesalers?

Imagine knowing what your customers will want tomorrow, next month, or even a year from now. This is the advantage accurate demand forecasting delivers — the ability to predict the items customers will buy, when, and in what quantities.

For wholesalers, accurate forecasting is the linchpin of effective inventory management, cost control, and business agility. Keeping service levels high and inventory costs under control is a constant balancing act; you need to avoid that lead to lost revenue as well as excess stock that sucks up cash flow, bumps storage fees, and can end in clearance sales.

By continuously merging historical inventory and sales data with broader insights like market trends and expert knowledge, you can create timely and accurate forecasts. This enables you to anticipate dynamic customer behaviour,

market trends, and economic conditions — not just react to them. You'll be able to make better strategic decisions in today's complex and competitive global market and strengthen supply chain resilience.

Accurate forecasting is crucial to ensuring timely inventory replenishment, thereby maintaining optimal safety stock levels to handle demand surges. It also helps you navigate challenges like prolonged lead times, fluctuating prices, and multiplying sales channels. Ultimately, all this improves your bottom line and frees up working capital so you can grow your business.

A 10% increase in forecast accuracy can lead to a 10% increase in profits!



What's holding you back from accurate forecasting?

Data! From historical sales figures to real-time transaction feeds to analyses of external market trends, accurate forecasting hinges on leveraging diverse information. Correctly combining and crunching multiple varied data sources can supercharge your ability to forecast accurately.

As a wholesaler, you're likely using an enterprise resource planning (ERP) system and there's no doubt it's a valuable repository of well-organised historical data. But here's the catch, most ERPs lack strong forecasting tools, leaving you to struggle with cumbersome spreadsheets to address complex forecasting requirements. If your master spreadsheet is now a monster spreadsheet, you need to leverage data more effectively to take your forecasting to the next level.





Excel limits your ability to forecast accurately

While Excel can be affordable and has useful features like conditional formatting, forecast functions, and basic data visualisation, it is far from an ideal tool for demand forecasting. Here are some of the key issues you'll face if relying on a spreadsheet-based approach.

Data size and complexity:

While Excel is great for basic tasks, it struggles with the large data sets and complex calculations often needed in inventory forecasting. You might face performance issues or system crashes as your data grows in size and complexity.

Limited automation:

Spreadsheet data needs to be manually updated and checked. The more products you stock, the longer the process takes and the greater the chance of human or system errors. Worse, you can find yourself relying on the knowledge of just one or two people — what happens if they leave?

Version control and collaboration:

Working in teams gets tricky with spreadsheets due to version control challenges. It can be hard to manage changes and ensure everyone has the latest data, leading to potential confusion and inaccuracies.

Scalability:

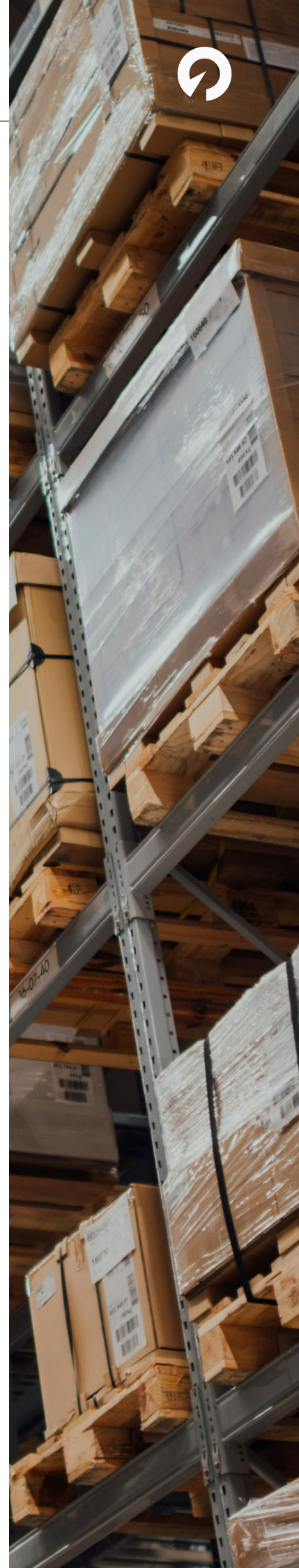
As your wholesale business grows, so does your forecasting data. Spreadsheets might not keep up with this growth, resulting in decreased performance and more errors.

Lack of advanced statistical models:

You need sophisticated forecasting models for better forecast accuracy, but spreadsheets fall short here.

Limited integration with external data sources:

For timely and accurate forecasting, integrating with external data sources is crucial. Spreadsheets often can't do this efficiently, limiting your data's scope and relevance.





You need more than an ERP

While ERP systems hold a lot of data from across your business, they usually lack the capabilities to reap the full benefits from it. It's not enough to bring all your raw data together; you must translate data into actionable information. Here are some of the common limitations you'll face when relying on an ERP system to forecast customer demand.

Rigid forecasting models:

ERPs are usually limited to a single model, which can limit the responsiveness and accuracy of your forecasts — especially if your inventory has unique characteristics.

Difficulty with seasonality and trends:

Some ERP systems aren't great at predicting demand that fluctuates heavily due to changing seasons or trends.

Integration challenges:

Connecting your ERP with other systems or data sources can be difficult. Poor integration can lead to delays and errors in your forecasting.

Complex implementation and upkeep:

Setting up and adjusting an ERP, including its forecasting features, requires a lot of effort and expertise. You'll need ongoing updates and tweaks to keep it aligned with your business needs.





3 Ways to improve forecasting accuracy





1. Know your data

Effective forecasting anticipates future demand by combining and analysing a broad array of information. The goal is to identify patterns and trends, not only in your own data but also in the wider market environment. At a high level, you should consider five areas.

Sales data:

What products were sold, when, and in what quantities? Key metrics include:

- ✓ Total sales volume,
- ✓ Sales by product/category,
- ✓ Seasonal sales trends,
- ✓ Year-over-year sales growth.

Inventory data:

What are your stock levels, item turnover rates, and replenishment times? Key metrics include:

- ✓ Current stock levels,
- ✓ Inventory turnover rate,
- ✓ Replenishment cycle time,
- ✓ Stockout incidents.

Customer data:

What are the buying patterns and order frequency? Key metrics include:

- ✓ Customer purchase frequency,
- ✓ Average order value,
- ✓ Customer preferences and feedback,
- ✓ Product return rates.

Internal insights:

What internal factors will impact demand or your ability to meet it? Consider:

- ✓ Upcoming promotional campaigns,
- ✓ Changes in product lines,
- ✓ Internal capacity changes.

External insights:

What wider market/economic dynamics point to changing patterns of demand? Consider:

- ✓ Market trends,
- ✓ Economic indicators,
- ✓ Competitive landscape,
- ✓ Regulatory changes.



Historical data is the cornerstone of accurate forecasting — encompassing past sales, inventory levels, and market trends. By delving into this data, you can identify patterns and learn from previous market responses. This isn't just about analysing numbers, but interpreting the story behind them to drive more informed and strategic inventory planning.

To leverage data effectively, you need to ensure it's consistent, accurate, up-to-date, and well-organised. Demand forecasting is a dynamic, evolving process. It adapts as new information comes to light, ensuring your business isn't caught off guard by market shifts. The insights your data provides are only valuable if they are available in real time. Even the most detailed and accurate picture of your business will be out of date most of the time if you only update it every month. It's also important to have a system in place that warns you of unusual activity and enables you to examine and adjust forecasting data to reflect normal demand.

Ultimately, it's combining data around inventory, sales, customers, or markets that makes demand forecasting so powerful. For example, tracking sales data but not stock levels might give you a forecast of zero sales for an item that's been in stockout for three months because it's so popular. You need to encourage active collaboration between departments like sales, marketing, finance, and operations, as well as with suppliers and partners, for a more cohesive forecasting approach based on a broader understanding of market dynamics and customer needs.





2. Apply the right forecasting techniques

In demand forecasting, there's no one-size-fits-all solution. Demand patterns can vary significantly — some items might have low sales, some could have intermittent demand, some may be seasonal, and so on. Each statistical forecasting technique has its advantages and disadvantages, so it's important to select the right approach based on your specific needs and goals. The choice of forecasting method can significantly impact the accuracy of your predictions. Let's delve deeper into five widely recognised forecasting methodologies, exploring how each one functions and their optimal use cases.

Simple moving average:

This method is useful if your demand is stable and past trends are a reliable indicator of future patterns. It calculates the average of your most recent sales data, giving you a straightforward prediction for the immediate future. If you deal with a wide range of products or face fluctuating demand, be cautious; this method doesn't factor in sudden changes or seasonal shifts, making it less suitable for volatile data sets.

Simple Moving Average

Formula:

$$SMA = \frac{X_1 + X_2 + \dots + X_n}{n}$$

Where $X_1 + X_2 + \dots + X_n$ are the most recent sales data, and n is the number of data points.

Exponential smoothing:

This is a great fit if your wholesale business experiences regular shifts in demand. It's adaptable and can manage different product types effectively. By giving more weight to recent sales data, it helps you respond quickly to market changes. Variants like double exponential smoothing or the Holt-Winters method can specifically address trends and seasonal patterns, which is ideal if recent changes are more indicative of future patterns than an item's long-term history.

Exponential smoothing

Formula:

$$\text{Forecast}_{t+1} = \alpha \times X_t + (1 - \alpha) \times \text{Forecast}_t$$

Where α is the smoothing factor X_t is the most recent actual observation, and Forecast_t is the previous forecast.



Croston's intermittent demand

If you're dealing with products that have sporadic demand, this method can be a game-changer. It separates the estimation of demand size and demand interval to address situations where sales are not consistent. However, the specialised nature of Croston's method means it is less applicable to products with more regular demand patterns.

Croston's intermittent demand Formulas:

$$F_t = \frac{D_t}{T_t} \quad \left| \quad F_{t+1} = F_t + \frac{(D_{t+1} - F_t)}{(T_{t+1} + 1)} \quad \right| \quad T_{t+1} = T_t + 1$$

Where F_t is the forecast, and D_t is the demand, and T_t is the time between non-zero demand occurrences.

Discrete distributions

Methods like negative binomial or Poisson distributions are particularly useful if you're tracking products with low sales volumes. The Poisson distribution is suitable for modelling events with a constant average rate, while the negative binomial distribution can handle over-dispersion in data where variances exceed the mean.

Poisson distribution Formula:

$$P(X = \kappa) = \frac{e^{-\lambda} \lambda^{\kappa}}{\kappa!}$$

Where λ is the average rate and κ is the number of events.

Negative Binomial distribution Formula:

$$P(X = \kappa) = \binom{r+\kappa-1}{\kappa} \cdot p^r \cdot (1-p)^{\kappa}$$

Where r is the number of successes needed, p is the probability of success, and κ is the number of failures.

Box-Jenkins (ARIMA)

If your wholesale business requires more sophisticated long-term forecasting, particularly for products with identifiable sales patterns over time, ARIMA models can be highly effective. They require a deeper dive into your sales data to identify and leverage trends, seasonality, and other factors, but can provide highly accurate forecasts.

Box-Jenkins (ARIMA) Formula:

$$Y_t = \mu + \phi_1(Y_{t-1} - \mu) + \phi_2(Y_{t-2} - \mu) + \dots + \phi_p(Y_{t-p} - \mu) + \epsilon_t - \theta_1\epsilon_{t-1} - \theta_2\epsilon_{t-2} - \dots - \theta_q\epsilon_{t-q}$$

Where Y_t is the observed value at time t , μ is the mean of the series ϕ is the autoregressive parameter, p is the order of autoregression ϵ_t is the error term at time t , θ is the moving average parameter, and q is the order of moving average.



3.

Start automating your forecasting

Given the competitive advantages of effective demand forecasting, it's vital to harness new tools that can make the process more accurate and efficient. If you're managing more than 1,000 SKUs, you should consider moving over to specialised demand planning and forecasting software.

Combining the most advanced machine learning with proven statistical forecasting methods is likely the best approach to moving beyond spreadsheets. Here are some of the ways that new automated tools can take your forecasting capabilities to the next level.

Accuracy and speed:

Automated systems use advanced algorithms and machine learning to reduce errors. These technologies can process large datasets, uncover patterns, and swiftly adapt to market shifts, making your predictions more accurate even when items have patchy sales histories. The best forecasting engines should also be able to detect and correct outliers.

Continuous improvement:

Machine learning algorithms constantly improve forecasts by learning from historical and real-time data, making predictions increasingly accurate over time.

Efficiency:

Automation saves considerable time by handling routine data tasks, allowing teams to focus on strategic analysis and exceptions.

Risk mitigation:

Automated forecasting reduces the risk of human error and enables proactive strategy adjustments.

Integration:

These tools integrate with other business systems, providing holistic data. Machine learning capabilities can be particularly useful for pulling third-party data, such as market trends or economic indicators, into your demand forecasting process.

Scalability:

As a business grows, automated systems easily handle the increase in data volume, making them ideal for expanding operations.



Routes to automation

Route 1

Continue using ERP forecasting:

Leverage your ERP's existing forecasting functions, but understand their limitations. Use built-in tools to create straightforward, rule-based forecasting models, such as a simple moving average to predict sales demand.

Route 2

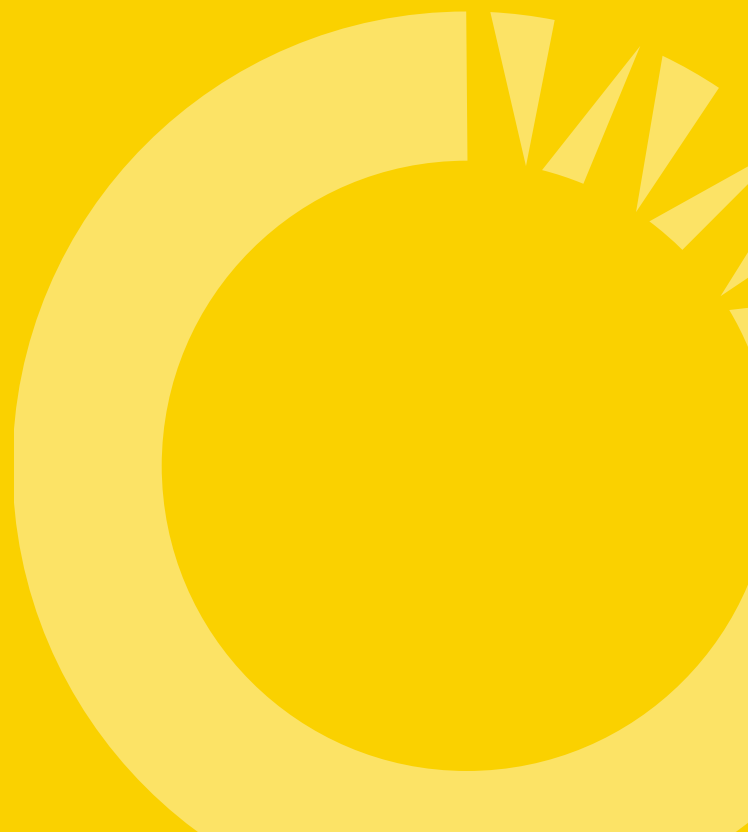
Automate spreadsheets and add BI tooling:

Automate existing spreadsheet processes using tools like Power Query or Google Sheets Scripts. Enhance visualisation and analysis by integrating Business Intelligence (BI) tools such as Tableau, Power BI, or Google Data Studio.

Route 3

Use inventory forecasting tooling:

Opt for specialised inventory forecasting tools like AGR. Connect the tool to the existing ERP system, configure parameters, provide historical data for training, and leverage built-in reporting features for insights.





It's time to look ahead

With accurate forecasts informing your demand plans, you'll reduce unnecessary carrying costs, avoid stockouts, and maximise sales. You'll also have happier customers, improved brand perception, and better supplier relationships.

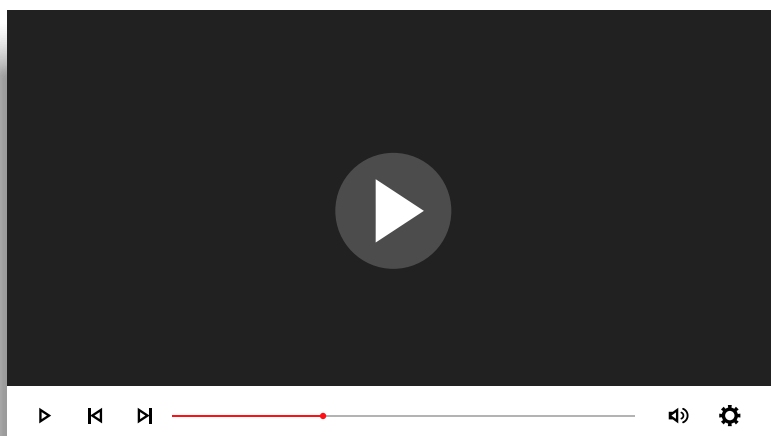
Fast to implement, easy-to-use and highly scalable, our cloud-based software has everything you need to drive accurate demand planning and forecasting. With cutting-edge tools rolled into one risk-free subscription, it's the missing link in your business success. With five different

forecasting models, we can find the most accurate fit for each item's future demand and catch all possible trends. By using a forecasting engine that analyses each demand pattern and selects the appropriate forecast model at each point in time, it's possible to drive much greater accuracy.

Learn more about how [we can help](#) or [watch our webinar](#) for further insights into more accurate demand forecasting.

Regal Wholesale improves service levels from 82% to 92% in seven months.

See how we helped this household goods wholesaler more accurately forecast demand, enabling the business to better cope with peaks and troughs, seasonality, and viral market trends, as well as streamline collaboration with suppliers.



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representative today
and discover how we
can help you Optimise
your inventory and
turn your supply chain
into a competitive
advantage.**

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