

The SMB's guide to inventory optimization software

A guide to EazyStock's features and functionality



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The 'what' and 'why' of inventory optimization

All businesses face turbulent and challenging marketplaces. Economic, political and social factors continue to drive change and uncertainty, with no let-up in the pressure organizations are under.

Globalization, product complexity, and high service demands also contribute to supply chain challenges.

Combining economic uncertainty with supply chain challenges makes it harder for businesses to meet customer demand and delivery expectations.

While they can carry additional stock to protect against unexpected demand increases, longer lead times, and fluctuating demand, they could end up with too much inventory. This ties up capital in products sitting on warehouse shelves, risking obsolescence.

All businesses, regardless of size, need to keep a strong balance sheet and their cash flow moving.

There's no denying that enterprise resource planning (ERP) or warehouse management systems (WMS) are great for tracking SKUs, reporting on stock levels, and managing orders, but these are all traditional linear inventory management functionality. As today's global markets follow non-linear patterns, they don't have the capabilities to help companies optimize their inventory.

This is where inventory optimization software can help, as it considers challenging market dynamics.

Introducing inventory optimization

Inventory optimization balances high service levels with the lowest possible inventory investment. This is done by forecasting demand and managing supply variables while adjusting stock rules and inventory parameters dynamically. It allows businesses to ensure product availability to meet demand while reducing inventory costs and minimizing the risk of excess stock.

Inventory optimization software calculates what stock to order, when, how much, and where to place it within the supply network. Rather than following a linear, rules-based approach, the software uses a probabilistic, statistical approach considering multiple factors that impact demand and supply variability down to SKU level.

For many businesses, inventory optimization is one of the fastest and most straightforward ways to improve bottom-line profitability. Many EazyStock customers find that they lower their inventory costs by at least 30% while simultaneously increasing their fulfillment capabilities by a similar percentage.



The rise in popularity of inventory optimization software

Large, enterprise-level corporations have invested in inventory optimization software for years to improve their service delivery and bottom line. Thanks to EazyStock, businesses of all sizes can now do the same.

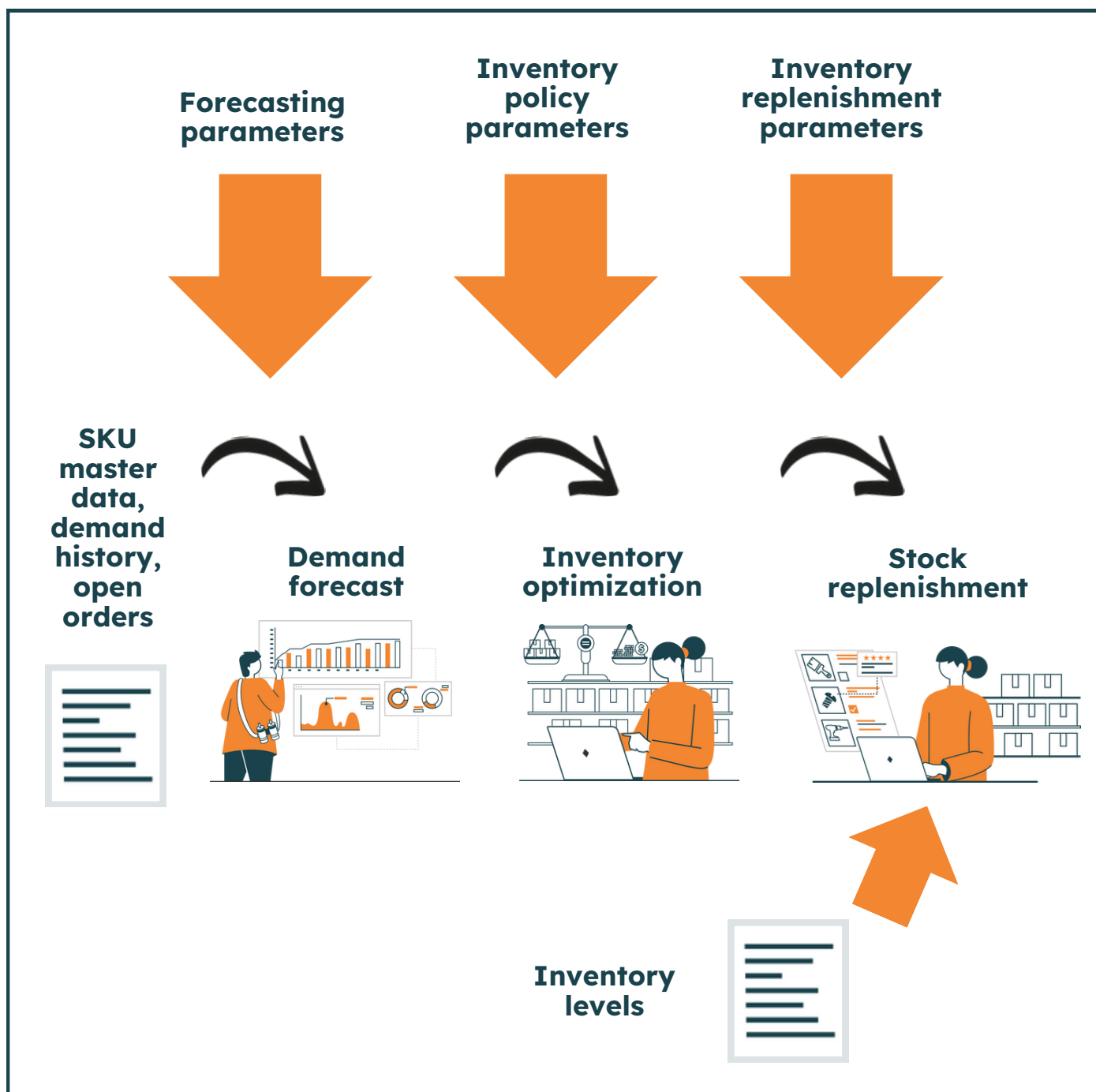
EazyStock is an ERP add-on that provides market-leading inventory optimization capabilities. It's a cloud-based system, so it's easy to implement and offers a fast ROI. We deliver EazyStock using a 'software as a service' (SaaS) commercial model, meaning it's a low-risk financial option with little upfront capital investment.

Sound interesting? This eGuide explains more about inventory optimization software, the value it can add to your business and the simplicity of its implementation.



EazyStock's key features

This diagram illustrates the three main processes carried out by EazyStock and the inputs needed to get up and running, so you're ready to optimize your inventory.





The data upload

Tranferring data from your ERP (or other business systems) to EazyStock is done via a simple FTP connection.

Raw data is exported into EazyStock, where the optimization calculations take place, and then the data is fed back to your ERP for purchasing activity to begin.



Demand forecasting

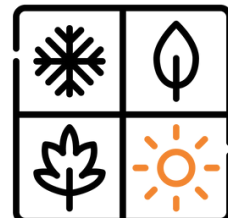


Demand forecasting and forecasting parameters

When EazyStock is initially set up, forecasting parameters are fine-tuned to account for your business and marketplace demand variables. EazyStock then calculates future demand forecasts while considering:

Seasonality

Reviewing historical sales data identifies seasonal patterns so forecasts can be adjusted accordingly. This helps prevent shortages during peak seasons and expensive surpluses as demand tails off.



Trends

EazyStock calculates trends for each SKU and, when deemed significant, adjusts demand calculations to maintain forecast accuracy.



Promotions

Special offers, discounts, and long-term price drops all impact the overall demand for your products. These qualitative factors can easily be manually added to the forecast.



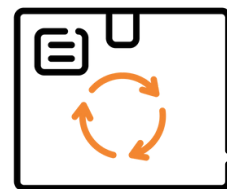
Forecast sensitivity

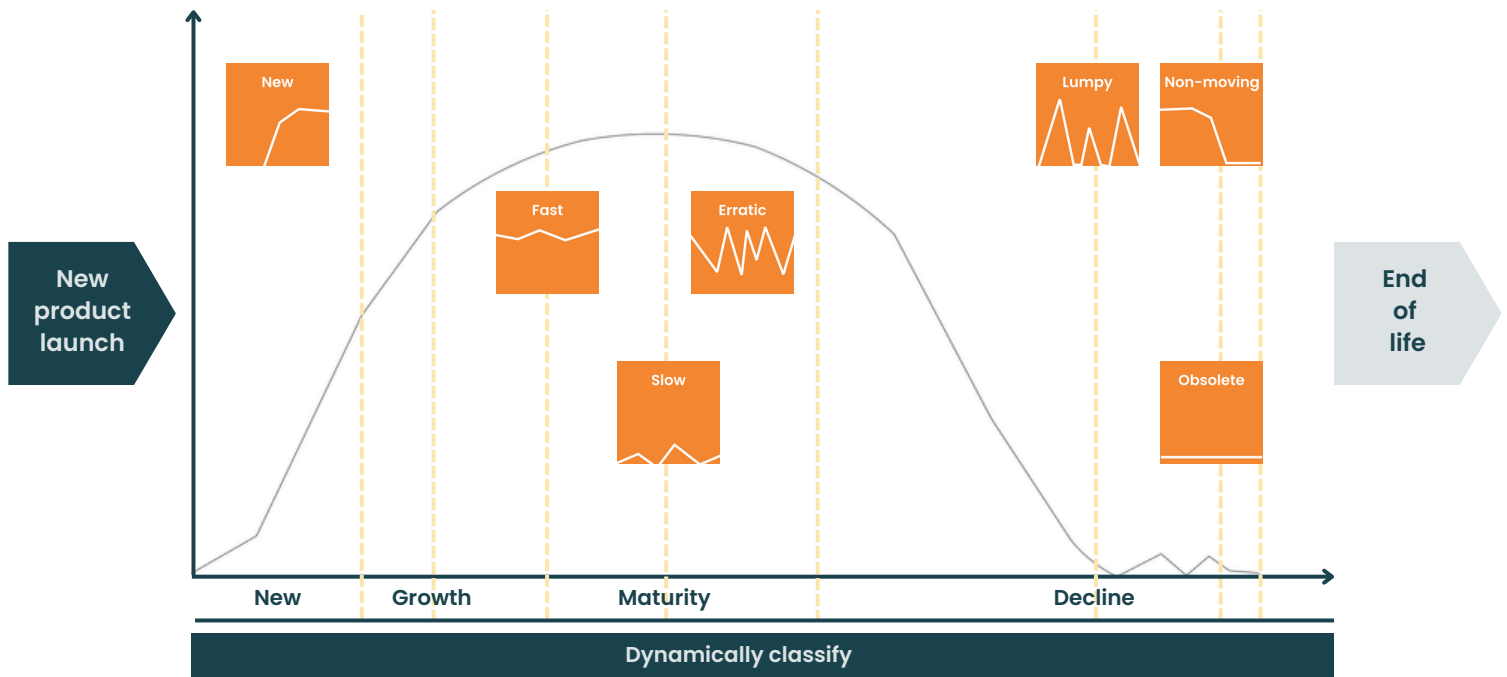
Some marketplaces are more dynamic than others. EazyStock can be configured to weight forecasts on more recent demand data (for fast-moving industries) or to consider longer historical demand periods (for industries where trends change much slower).



Product lifecycle and consequential demand type

Every product has a lifecycle where each stage will see different demand levels. For example, when a product is first introduced to the market, its demand will likely follow a positive trend as sales increase until it hits maturity and sales and demand stabilize. From there, demand might get more erratic and move into a negative trend before becoming a dying and then obsolete product.





EazyStock constantly tracks an item’s position along the product lifecycle and assigns the relevant ‘demand type.’ Demand types are important as they dictate the statistical algorithm EazyStock uses for forecasting. For example, a different algorithm is used to forecast demand for a product with ‘lumpy demand’ (with a high deviation from its mean average demand) to a product with ‘fast demand’ (with minimal deviation).

As products move along their lifecycle, the system will update the demand types and the corresponding algorithms to maintain forecast accuracy.

In summary, by considering such a wide range of demand variables, EazyStock produces more accurate forecasts than the simple, moving average calculations often used by ERPs and WMS.



Inventory optimization and inventory policies

With the forecasting machine up and running, EazyStock recommends the optimum quantities of each SKU that should be stocked in your warehouse.

A traditional way of calculating stocking policies (often used by ERPs and WMS) is to use a simple ABC analysis model. This is where items are classified based on their value to the business, prioritizing 'A' items that make the most money over lesser-performing 'B' and 'C' goods.

Stock classification is much more advanced with inventory on several key criteria:

The value of annual usage (VAU) of each SKU: this considers account sales volume as well the unit cost of the product.

How often each SKU gets picked: this distinguishes high-volume products with many requests (1000 requests for 1 unit) from high-volume products with low requests (2 requests for 500 units).

The demand volatility of each SKU: EazyStock automatically segments items based on their demand volatility behavior and, therefore, how easy it is to forecast their demand.

The result is the ability to create a number of inventory policy matrixes based on different demand types. With 81 varying stock/no-stock rules in each matrix, they provide a much deeper level of detail, allowing businesses to make more informed stocking decisions than using a simple ABC analysis framework.

| Picks class | | VAU class | | | | | | | | Sum of picks | |
|--------------|----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------|
| | | A1 | A2 | A3 | A4 | B1 | B2 | B3 | C1 | | C2 |
| P0 | 0 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0 |
| P1 | 1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 365 |
| P2 | 2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 348 |
| P3 | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 333 |
| P4 | 4 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 320 |
| P5 | 5 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 563 |
| P6 | 7 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 755 |
| P7 | 11 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1,923 |
| P8 | 25 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 4,522 |
| Sum of picks | | 331 | 1,202 | 1,211 | 1,833 | 677 | 661 | 928 | 444 | 1,842 | 9,129 |

During the EazyStock set-up phase, the team will work closely with you to decide on stock/no-stock items and fine-tune the inventory policy matrixes based on your product portfolio's unique characteristics.

For example, most companies would aim to reduce their stock levels of items with high VAU and low pick frequencies, to reduce the risk of building up excess stock of high-cost SKUs.

The next stage is for EazyStock to calculate a target service level matrix similar to the one below.

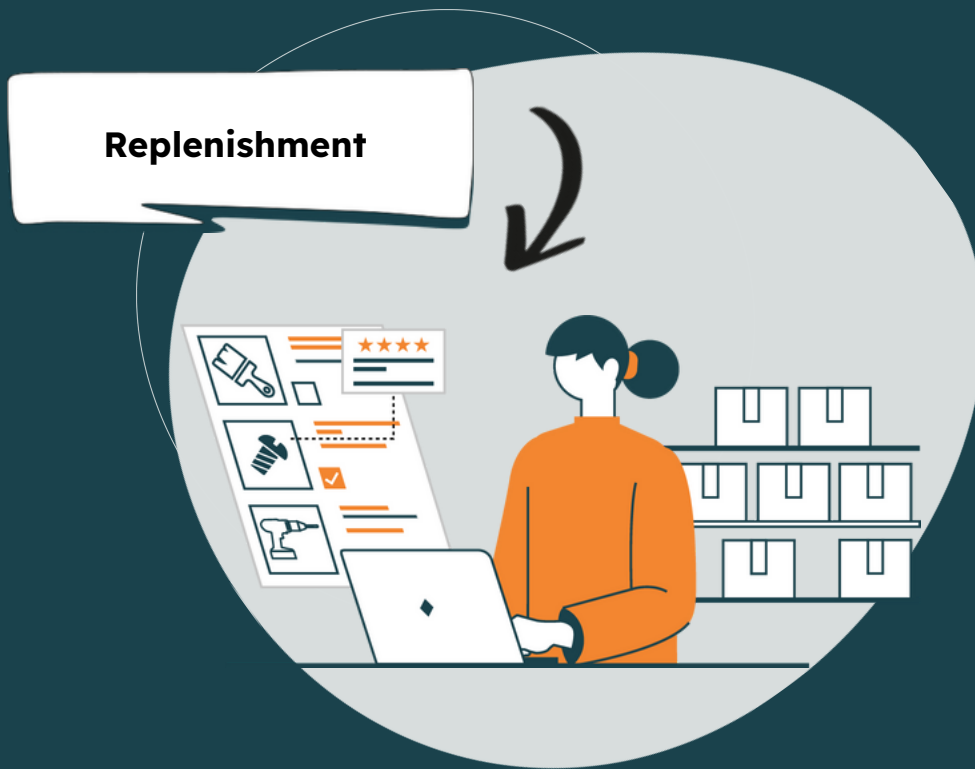
As you can see, for every inventory segment, EazyStock calculates a recommended target service level (as a percentage). Service level is another term for ‘product availability’ and is the probability of not getting a stockout.

| Picks class | DG | A1 | A2 | A3 | A4 | B1 | B2 | B3 | C1 | C2 | |
|-------------|----|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P0 | 0 | N | 94.00% | 95.00% | 96.00% | 96.50% | 97.00% | 97.50% | 98.00% | 98.50% | 99.00% |
| | | L | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% |
| | | S | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% |
| P1 | 1 | N | 94.00% | 95.00% | 96.00% | 96.50% | 97.00% | 97.50% | 97.10% | 80.00% | 99.45% |
| | | L | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 98.40% |
| | | S | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 99.25% | 99.80% |
| P2 | 3 | N | 94.00% | 95.00% | 96.00% | 96.50% | 97.00% | 97.30% | 97.00% | 97.40% | 99.40% |
| | | L | 70.00% | 70.00% | 60.00% | 60.00% | 60.00% | 70.00% | 93.00% | 95.00% | 99.00% |
| | | S | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 97.50% | 99.25% | 99.95% |
| P3 | 5 | N | 94.00% | 82.50% | 96.00% | 96.50% | 97.00% | 91.00% | 97.20% | 99.10% | 99.65% |
| | | L | 70.00% | 70.00% | 70.00% | 70.00% | 70.00% | 82.50% | 93.50% | 97.50% | 99.60% |
| | | S | 90.00% | 90.00% | 90.00% | 90.00% | 90.00% | 95.00% | 98.80% | 99.75% | 99.95% |
| P4 | 7 | N | 94.00% | 95.00% | | | | | | | |
| | | L | 60.00% | 70.00% | | | | | | | |
| | | S | 90.00% | 90.00% | | | | | | | |
| P5 | 10 | N | 92.50% | 95.00% | | | | | | | |
| | | L | 70.00% | 70.00% | | | | | | | |
| | | S | 90.00% | 90.00% | | | | | | | |
| P6 | 15 | N | 95.00% | 97.40% | | | | | | | |
| | | L | 70.00% | 70.00% | | | | | | | |
| | | S | 90.00% | 90.00% | | | | | | | |
| P7 | 24 | N | 97.80% | 99.45% | | | | | | | |
| | | L | 70.00% | 70.00% | | | | | | | |
| | | S | 99.90% | 90.00% | | | | | | | |
| P8 | 47 | N | 99.90% | 99.90% | | | | | | | |
| | | L | 70.00% | 70.00% | | | | | | | |
| | | S | 90.00% | 90.00% | | | | | | | |

| Picks class | DG | A1 | A2 |
|-------------|----|----|--------|
| P0 | 0 | N | 94.00% |
| | | L | 70.00% |
| | | S | 90.00% |
| P1 | 1 | N | 94.00% |
| | | L | 70.00% |
| | | S | 90.00% |

Service level is an important fulfillment key performance indicator (KPI) that shows how well demand is being fulfilled.

Typically, EazyStock sets higher service level targets for products that are picked more frequently with a lower VAU. The team will help you balance your capital investment in stock with your fulfillment targets.



Stock replenishment and inventory replenishment parameters

During implementation, EazyStock's replenishment parameters are configured to reflect the demand dynamics of the market in which you operate, accounting for variables such as seasonality, speed of innovation, and demand volatility.

Once replenishment parameters are set for each SKU, they are combined with inventory policies and target service levels to determine the algorithms that EazyStock uses in its replenishment calculations.

This is another key difference between traditional ERPs or WMS and EazyStock. While the former often use rules-based methodology to calculate replenishment, EazyStock uses statistical algorithms that consider supply and demand variables.

Let's look at some examples of EazyStock's replenishment functionality:

Safety stock levels

This is stock used to cover any uncertainty in demand and supply during your lead time (once you have used all cycle stock). Many ERPs use a rules-based approach to calculate cycle and safety stock, e.g. they hold a certain number of weeks' cycle stock based on historical average demand and then add a few more weeks of safety stock, just in case.

In comparison, EazyStock uses statistical algorithms to consider important factors, such as service level, forecast accuracy, and lead time variability. Since each SKU in your inventory has a unique demand pattern, it will adjust safety stock levels accordingly.

Reorder alerts

Most businesses (and ERPs and WMS) will reorder when they hit a fixed date or when stock drops to a specified level. Both methods fail to consider demand and supply variations.

Recommended order quantities

The three traditional ways to set reorder quantities are ordering a regular fixed amount, varying the amount to hit a maximum or minimum capacity, or using the Economic Order Quantity calculation. Again, the calculations are one-dimensional and do not reflect supply and demand dynamics.

Instead, EazyStock automatically generates daily order proposals that consider demand forecasts, inventory policies, safety stock, current stock levels, reserved stock, goods-in-transit, and back-orders.

They also account for any supplier contractual constraints, such as maximum and minimum order quantities, so always suggest the optimal order quantity.

With all the above replenishment calculations set up, EazyStock provides a list of items and quantities to reorder. You can then decide whether to review the orders (which you may do for high-priority, slow-moving items) or automate the ordering process (which you may do for faster-moving, low-value items where the risk of excess stock is low). You can then import the orders back into your ERP system for processing.

EazyStock continuously analyzes your stock to ensure each SKU falls into the correct demand type (based on its behavior) and the appropriate area of the inventory policy matrix. This ensures it's subject to the correct inventory policy and replenishment parameters.



EazyStock benefits

We've covered the fundamental functionality of EazyStock, now let's look at some of its key benefits.

At a strategic level, EazyStock can help businesses make more informed stock management decisions.

While some businesses may be looking to increase stock turnover and free up capital associated with high stock levels, others may want to reduce out-of-stock episodes and improve service levels. In many cases, management is looking for a balance between the two.

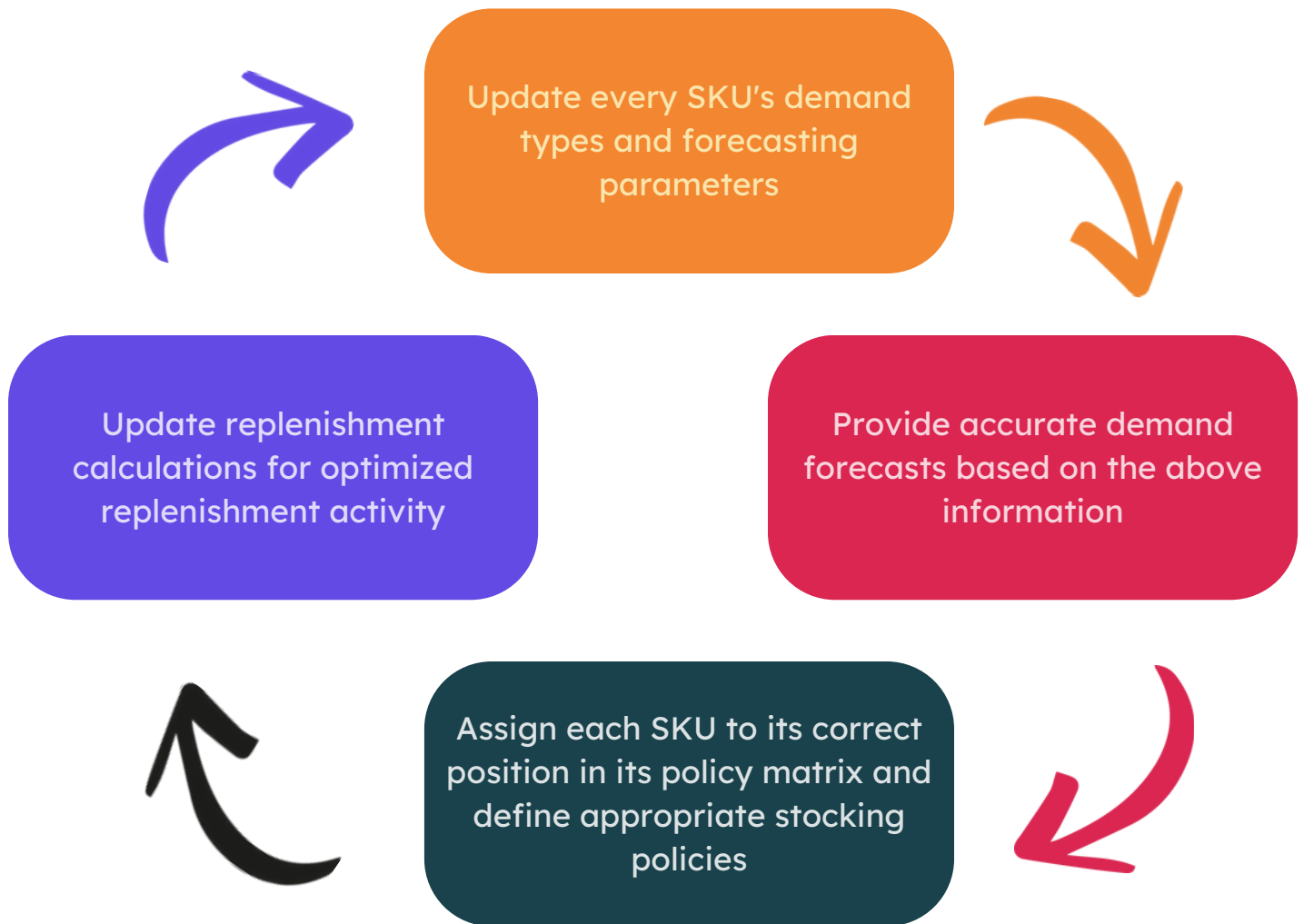
EazyStock allows users to test their optimization strategies to understand the trade-off implications between further lowering or increasing inventory levels and the consequences on product availability and investment.

Whatever your chosen strategy, EazyStock provides the insight and tools to optimize your stock to meet your objectives. With inventory policies and service levels set, you'll have a strategy that feeds into day-to-day replenishment activities.

At a more tactical level, a key benefit of inventory optimization software is its ability to react to dynamic supply and demand variables.



With a regular feed of sales data, current inventory levels, and supplier information, EazyStock continually churns the numbers to:



This is a perpetual process, so your ERP always receives optimized replenishment recommendations.

This results in the more efficient day-to-day running of your business, with reordering that considers demand and supply variability and prevents overstocking. Inventory management teams no longer have to spend time ‘fire-fighting’ when goods go out of stock, and costly backorders are a thing of the past. Instead, employees have more time to focus on value-adding tasks.

EazyStock as an ERP add-on

As we've explained, EazyStock can enhance the inventory management capabilities of most ERP and WMS systems. It's also easy to get up and running.

Rapid implementation

Introducing add-on software, such as EazyStock, should not disrupt your business processes. Unlike many business systems, EazyStock does not process transactions, which is a key reason for slowing down implementation projects. Instead, EazyStock takes the data from your existing ERP or business systems, establishes the optimal mix between inventory investment and service levels, and passes the results back. Therefore, the integration required is very quick to set up, and EazyStock customers can be up and running within weeks of signing a contract.

Affordability

With the technical ability to connect via the cloud, you reduce operational costs and expenditure on hardware, software licenses, and implementation services. In addition, the emergence of the SaaS procurement model makes integrating EazyStock a low-risk option with virtually no upfront capital investment.



Scalable and flexible

You can easily scale EazyStock up or down to meet your business's ever-changing demands and ensure you get the most value from the application.

Easy user adoption and unrivaled support

As EazyStock is usually used by stock control, inventory planning, or purchasing teams, you don't need to spend time training your entire workforce. EazyStock has a wealth of features. Our Customer Success Managers begin with the basics that add ROI from day one and build up the functionality as users gain confidence and ability.



Delivering ROI

If your business finds it hard to meet fulfillment targets, lower investment in inventory, or prevent out-of-stock scenarios, it's worth investigating how EazyStock can help.

As an easy-to-implement ERP add-on, EazyStock offers a wealth of additional functionality that will deliver ROI within months of implementation:

- By using advanced analytics and statistical algorithms to manage supply and demand variables, you'll consistently have optimal inventory levels to meet demand efficiently.
- Additionally, you'll be able to proactively lower your stock levels, freeing-up capital and reducing excess stock and the risk of obsolescence.
- Finally, by automating your inventory planning and purchasing, you'll improve efficiency, free up your team's time for other valuable activities and have the tools to make more informed decisions.

Book a demo today for a more detailed look at how EazyStock works.



eazystock

**Find out more about
inventory
optimization**

Book a demo