

Inventory health self-assessment

How healthy is your inventory?
Here are 12 questions to help you find out



Contents

How healthy is your inventory?	3
Does your operating inventory fall into the three major reporting categories?	4
Do you have an action plan to reduce excess and obsolete inventory?	6
What service level or fill rate is your warehouse achieving?	7
Who decides on the right balance between stock availability and cost-effective inventory levels?	9
How accurate are your demand forecasts?	11
How often do you update your demand forecast in your Enterprise Resource Planning system?	15
How do you calculate safety stock levels?	16
Do you recalculate safety stock levels regularly to keep them up-to-date?	17
How do you determine the optimal frequency for reordering stock?	18
How do you calculate order quantities?	20
Do you regularly review and recalculate your optimal reorder frequencies and quantities?	22
Do you have unified inventory management policies throughout your supply chain?	23
Don't just manage it; optimize it!	25

How **healthy** is your inventory?

Your stock levels influence cash flow and indicate your company's overall health. This means that balancing stock levels with capital expenditure is critical for businesses to ensure operational efficiency and deliver excellent customer service.

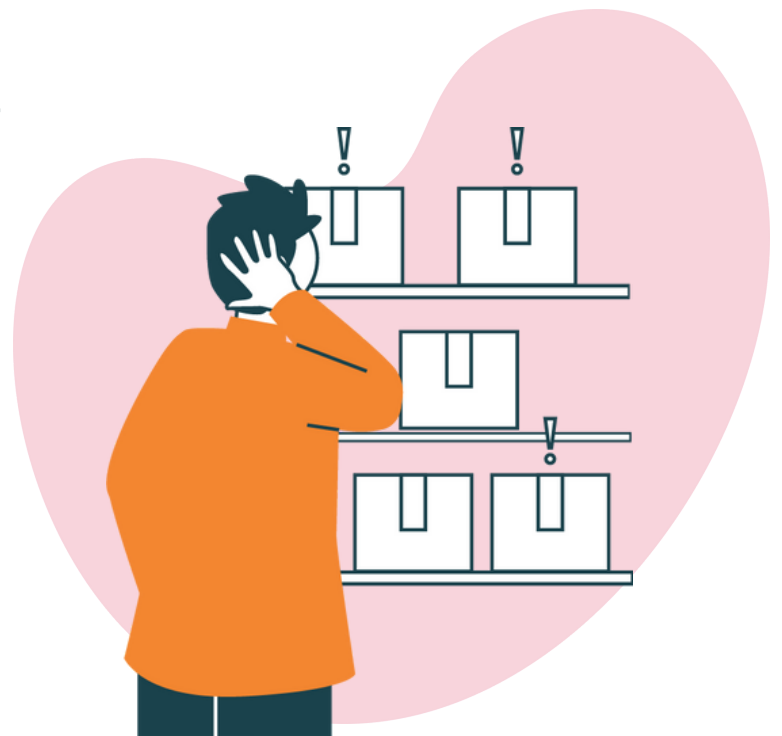
A health check will help you with the challenging task of analyzing the 'health' of your inventory management processes, policies, and return on investment.

Benchmarks seldom provide the insights expected. Data is often inaccurate. The resulting blurred conclusion makes it difficult to set targets and measure success.

Our inventory health self-assessment makes things easier.

These questions will reveal the efficiency of your organization's inventory control strategy and give pointers on improvements.

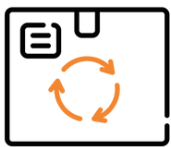
The answers could prove eye-opening, so let's get started!





1 | Does your **operating inventory** fall into the three major reporting categories?

There are three categories of inventory of which you should be able to place your operating inventory.



Cycle stock

The inventory you plan to sell based on demand forecasts



Excess stock

When stock levels for a product exceed forecasted demand



Obsolete stock

When stock remains in the warehouse but there is no demand for at least 12 months

Understanding the status of your inventory provides an initial insight into its health. Ideally, you should only carry cycle stock or 'healthy' inventory items needed to meet customer demand. Excess and obsolete stock tie up capital and be costly.

Excess and obsolete stock is typically caused by:

- Poor demand forecasting
- Inaccurate replenishment tactics
- Lack of product lifecycle tracking

If you identify excess or obsolete stock sitting in your warehouse, you need to investigate the root cause and make changes.

Money tied up in too much stock is bad for your cash flow and could be used for other investments, such as sales and marketing, additional storage, or research into new products.

Holding stock also leads to excessive carrying costs, e.g. the cost of warehouse space, insurance, perishability, etc.

Excess stock can quickly become obsolete, which will affect your profit margins.





2 | Do you have an action plan to reduce excess and obsolete inventory?

Typically, excess and obsolete stock results from ineffective demand forecasting and setting inaccurate safety stock and replenishment parameters.

While you need to establish processes that determine the causes of excess inventory and put things right, developing an action plan to eliminate the unnecessary stock is also key.

Don't fear writing-off obsolete stock or selling excess stock at a discount. This will reduce your carrying costs, such as warehouse costs, insurance, and spoilage, while freeing up working capital.



3 | What **service level** or fill rate is your warehouse achieving?

Let's start by clarifying the difference between service level and fill rate. These key performance indicators (KPIs) measure stock availability and can be calculated in many different ways, but here are the basics:

Fill rate

The percentage of customer orders that can be fulfilled from stock in the warehouse.

$$\text{Item fill rate} = \frac{\text{Number of items delivered}}{\text{Number of items ordered}}$$

Ultimately you should aim for an item fill rate of 100%. A fill rate well under 100% means you're experiencing stockouts, which will affect customer service, so make sure you investigate the causes so you can correct them.

Service level

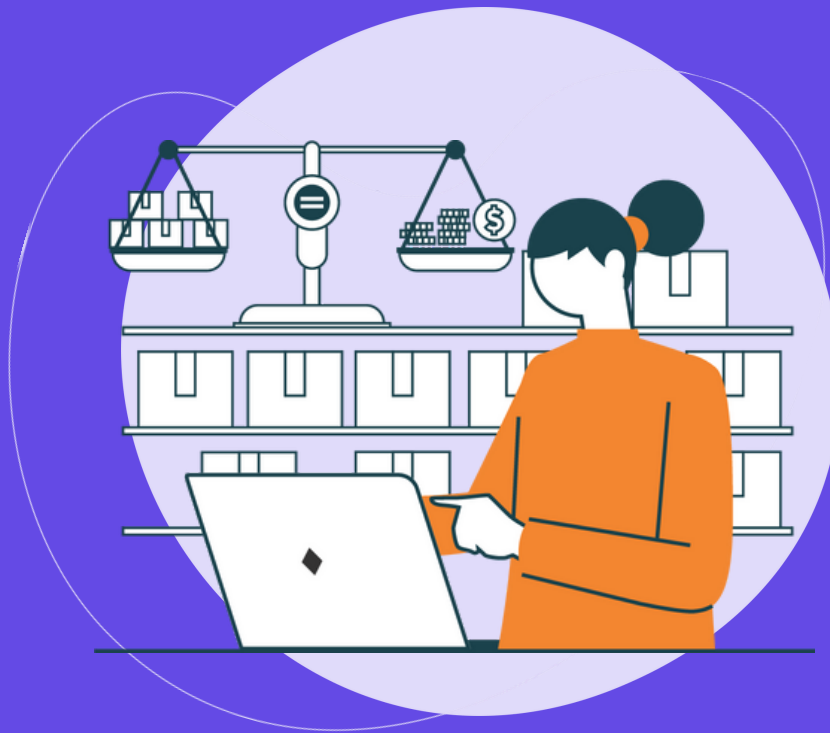
This measures whether an inventory item was out of stock when requested for delivery, leading to an unfulfilled order.

In other words, it looks at whether historical demand (or sales orders) was met from the inventory in stock.

If your service level is 100%, you can expect all transactions to be completely fulfilled from available stock. You need to investigate further if your service level rate is much lower than 100%.

Decide which KPI is the best to ensure efficiency across your business – you may want to track both.





4 | Who decides on the right balance between **stock availability and cost-effective inventory levels?**

When working with clients, we come across many misconceptions. The two most common are:

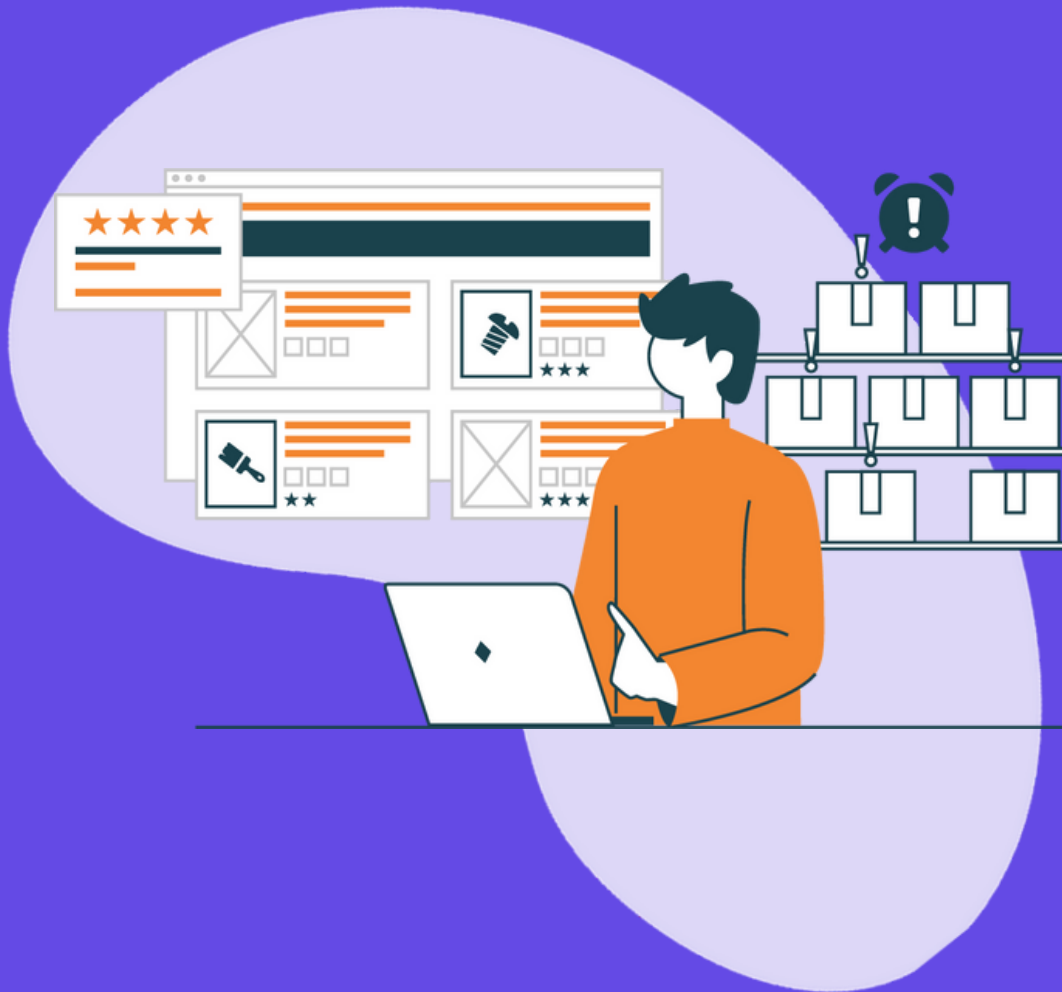
- Improving the accuracy of sales forecasts is the best way to reduce inventory.
- Improving customer service requires holding large amounts of inventory to ensure fulfillment.



These assumptions can lead to excess inventory or, the complete opposite, stock shortages – both of which can be costly to any business.

Your organization needs to balance having enough stock on hand to hit target service levels and not tying up too much working capital. It's essential to have a company-wide agreement to balance the two, so avoid making decisions within departmental silos.

Ensure you include employees with insights across the whole supply chain when discussing fundamental issues impacting inventory management.





5 | How accurate are your demand forecasts?

Accurate demand forecasting is critical to ensure your stock levels meet projected customer demand. Ask yourself the following questions:

1. Can you identify different demand types as products move through their lifecycle?

As products move through their product lifecycle (from launch to growth, maturity, and decline), they will have different patterns in demand or demand types. An item's demand type is important as it determines the kind of calculation (or algorithm) you use for forecasting.

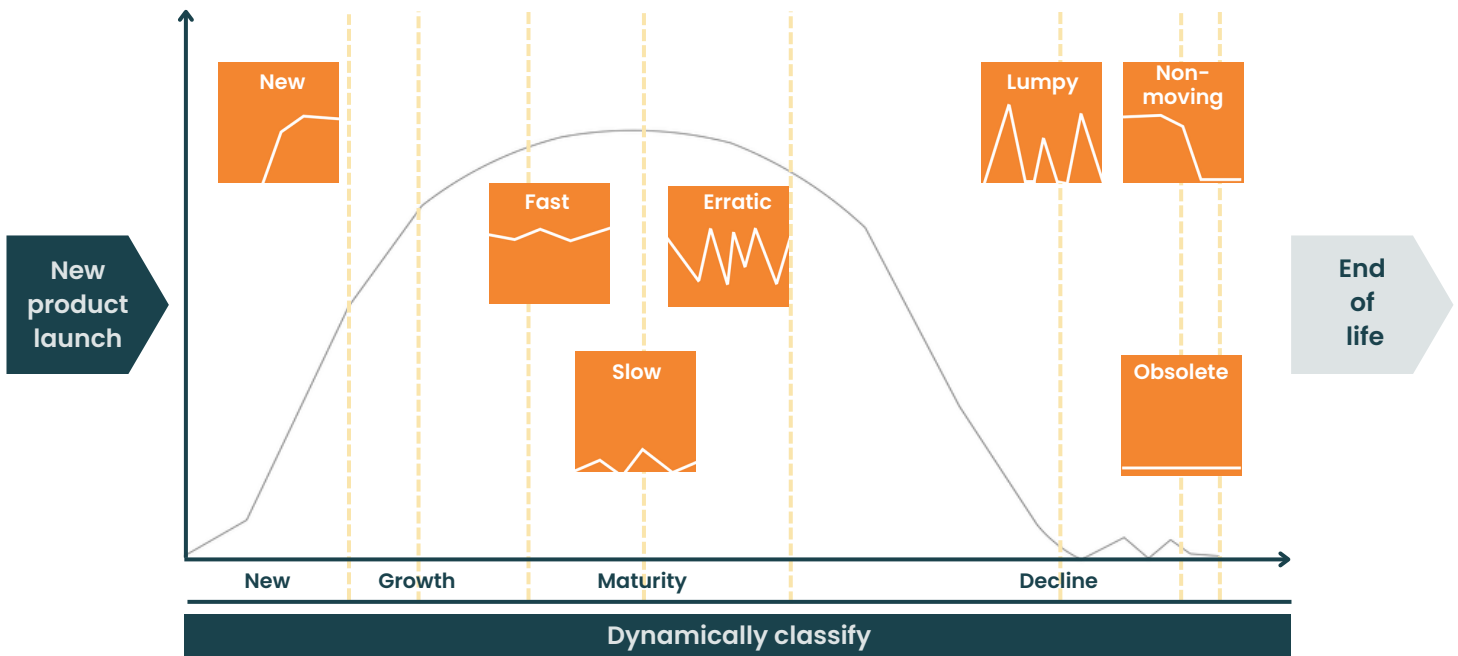


Diagram: Product lifecycle and demand types, as classified by EazyStock

Understanding the lifecycle stage of your products and their associated demand type will improve your forecast, ensuring you don't miss sales opportunities or end up with excess stock.

2. Do you apply the best forecasting technique for each demand type? Or do you use simple moving average forecasts across all SKUs?

The simplest way to forecast demand is to use a time-based, moving average calculation, e.g. historical average demand during x months divided by x months. However, this method fails to consider the demand types discussed above.

Demand types dictate the statistical algorithm that should be used to forecast demand. This is because each demand type deviates from its mean average demand. For example, 'lumpy demand' rises and falls with lots of deviation from the mean, whereas 'fast demand' has a lot less. It, therefore, makes statistical sense to use a different algorithm to forecast demand for a product with 'lumpy demand' than for a product with 'fast demand'.

Forecasting will be far more accurate if you apply different forecasting techniques at different phases of the product lifecycle. This allows you to account for the available historical demand data and market knowledge.

3. Are there seasonal factors you need to consider, and how do you manage them?

You should review all products carefully for seasonal activity. You don't want to lose sales due to shortages during your peak seasons or have expensive surpluses as demand tails off.

When calculating seasonal demand, you need to:

- Identify which products are affected by seasonal demand
- Understand when the peaks will happen
- Accurately forecast the relative size of those peaks compared to normal demand
- Understand the level of uncertainty associated with those forecasted peaks.

It's best practice to keep seasonal demand factors separate from your base demand calculations. This keeps the data clean and easier to use for forecasting going forward.



4. Do you calculate your forecast error?

One way to check the quality of your demand forecast is to calculate its forecast error. Forecast error is the deviation of the actual demand from the forecasted demand.

If you can calculate the level of error in your previous demand forecasts, you can factor this into future ones and make the relevant adjustments to your planning.

Common calculations for working out forecast error include:

- **Mean Absolute Percent Error (MAPE)** – the average of percentage errors.
- **Mean Absolute Deviation (MAD)** – the deviation of forecasted demand from actual demand in units.

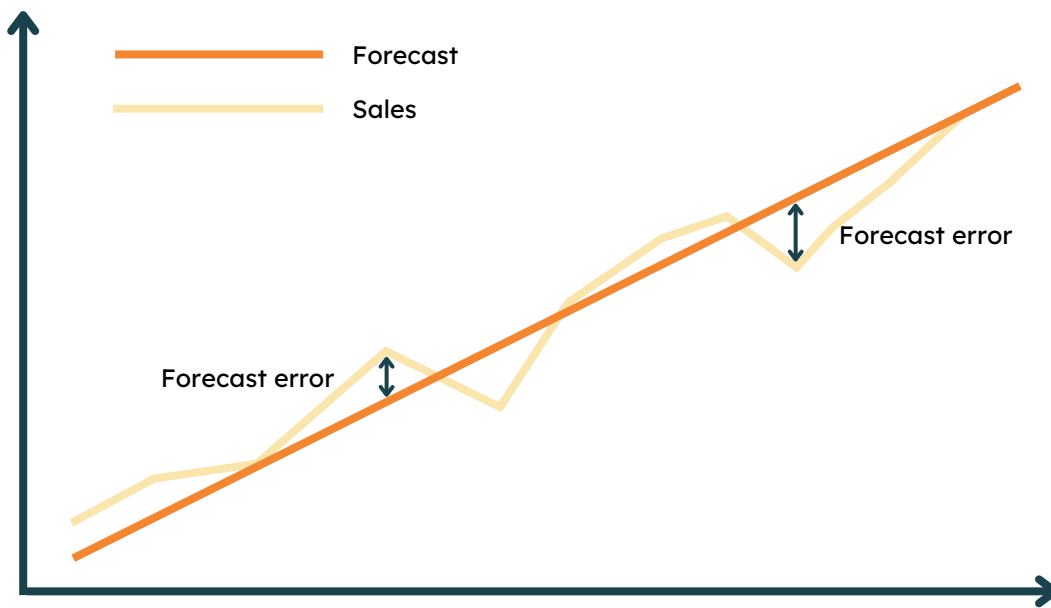


Diagram: Calculating forecast error



6 | How often do you **update your demand forecast** in your Enterprise Resource Planning system?

Demand forecasting should be intrinsic to your enterprise resource planning (ERP) system. It should be an ongoing process to ensure stock reordering parameters match customer buying habits.

- Keep your ERP system up-to-date to ensure accurate replenishment calculations.
- Make sure you understand the limitations of your ERP. Most are good at placing minimum and maximum order quantities but less effective at reordering based on forecasted demand.
- If you calculate demand forecasts manually, ensure you do it regularly for each stock-keeping unit (SKU).



7 | How do you calculate **safety stock** levels?

No demand forecast will be 100% accurate, so you need to plan for forecast errors. This is usually by holding safety or buffer stock.

There are many ways to calculate the amount of safety stock you need - from the very simple to the very complex.

However, if your business sets a fixed safety stock level based on your 'best guess', you risk carrying too much or not enough inventory, meaning you'll miss your service targets.

A good way to set safety stock levels is to calculate them statistically and ensure they consider forecast error, service level targets, and supply variables.

You could also use inventory optimization software to manage the calculation for you.



8 | Do you **recalculate safety stock levels regularly** to keep them up-to-date?

Ideally, you should recalculate your safety stock levels monthly for every SKU, particularly in fast-moving markets.

This is because demand shifts and supplier lead times change, so you need to adjust safety stock accordingly.

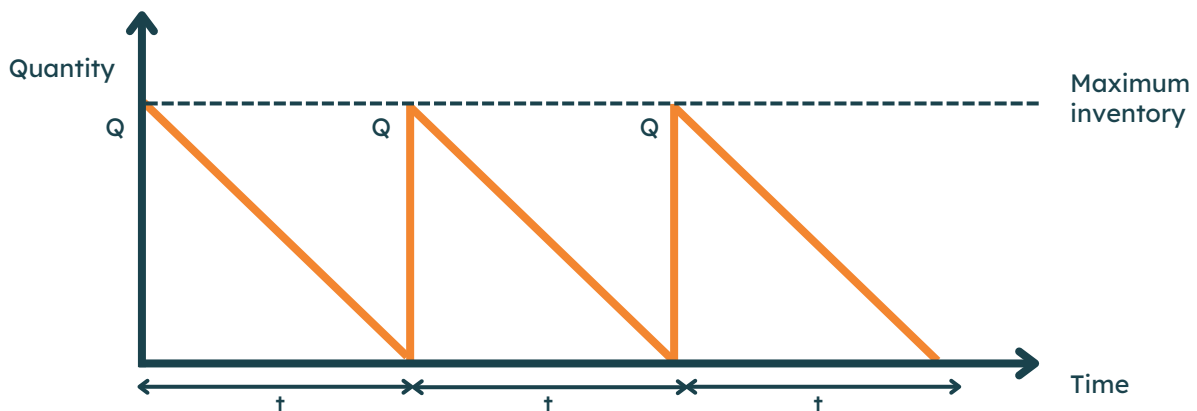
If you manually calculate safety stock in a spreadsheet, aim to review and update your calculations every three to six months. Typically, the more time between updates, the more risk there is of stockouts or excess stock levels piling up.



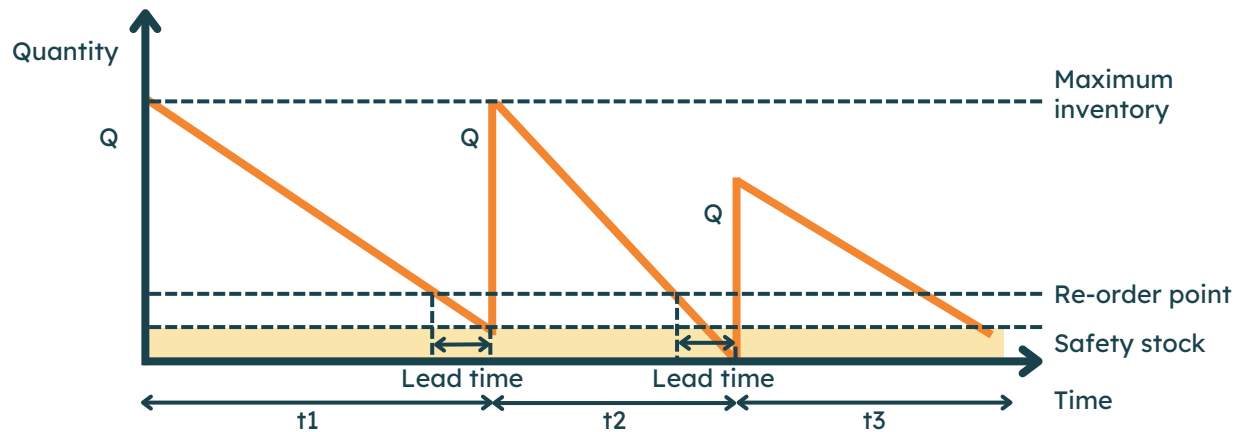
9 | How do you determine the optimal frequency for reordering stock?

Most businesses replenish their stock levels if they encounter one of two scenarios:

1. A predetermined period has expired (fixed order cycle (FOC) system)



2. Inventory has fallen below a predefined level (reorder point system)



N.B. In both examples, the order quantity is fixed to avoid confusion.

However, these linear methods fail to account for supply and demand variables. A more accurate way to set reorder points is to factor in the following:

- Your demand forecasts (to mirror customer demand)
- Safety stock levels (to avoid stockouts)
- Supplier lead times (to account for supplier holidays or busy periods)

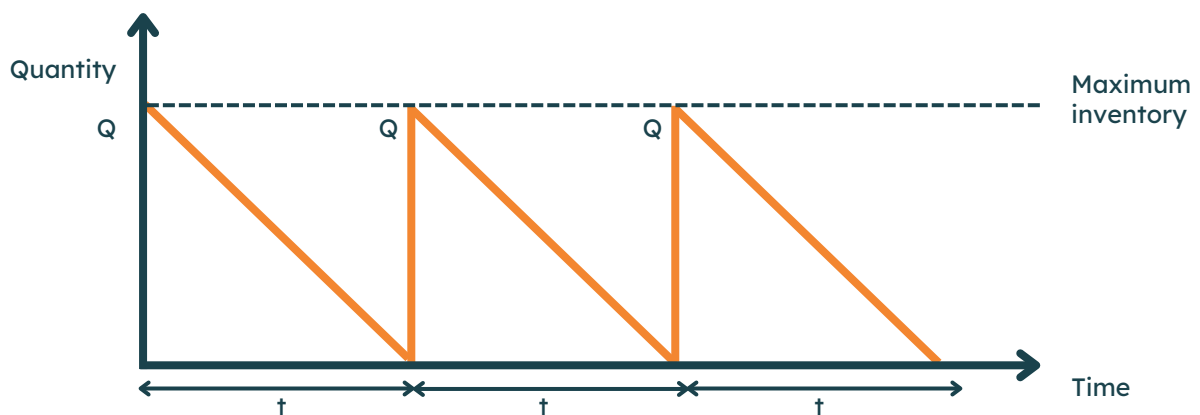
Review your current replenishment rules. Are you confident they optimize your inventory levels to ensure availability without overstocking?



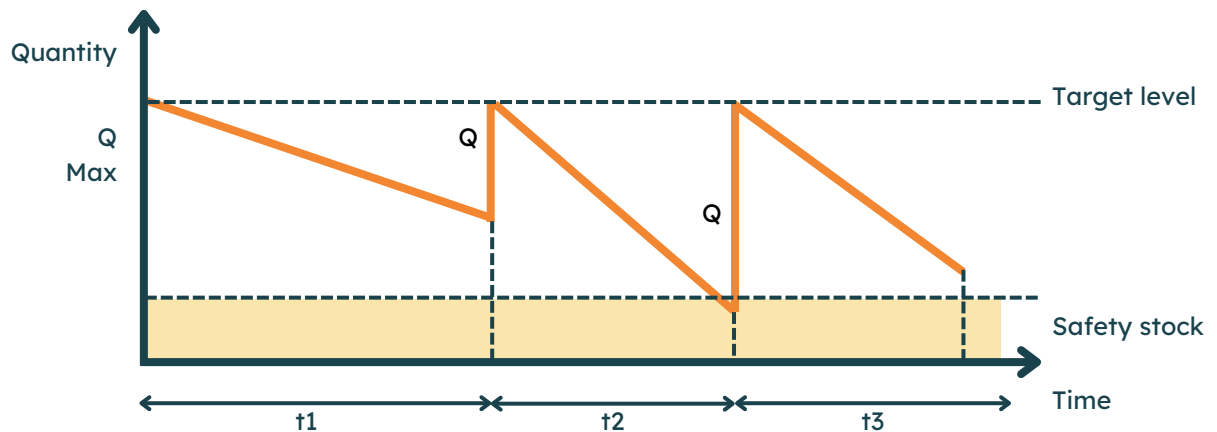
10 | How do you calculate order quantities?

Many businesses determine the amount of inventory they order based on one of two criteria:

1. They order a pre-determined fixed quantity (FOQ)



2. They order a variable quantity that tops up their current stock levels to a specific capacity (either a maximum level or one based on demand).



N.B. In both examples, the reorder period is fixed to avoid confusion.

Some businesses may use the Economic Order Quantity (EOQ) model to calculate their optimal order quantities. The EOQ calculation works out the right amount to reorder based on when carrying and ordering costs are at their lowest.

Review your ERP system and ensure it calculates the optimal order quantity for each SKU in your warehouse. Make sure it uses a sound mathematical model that considers demand, lead times, and carrying and ordering costs.

Inventory optimization tools, such as EazyStock, automate replenishment activities and use sophisticated algorithms to generate re-order parameters. Daily order proposals are generated, providing a list of items and quantities to re-order. You can then decide whether to review the orders or automate the ordering process. The result is that you order more economically to meet customer demand while holding less stock.



11 | Do you regularly review and recalculate your optimal re-order frequencies and quantities?

Demand and supply variables fluctuate constantly. To continually achieve your target service levels (or fill rates) and reduce your inventory levels, you'll need to review and recalculate your replenishment parameters regularly.

It's much more efficient to refine re-stocking policies upfront than to correct over or under-stocking issues down the line.

An efficient inventory management system will continuously track and recalculate optimal order points and quantities for ongoing cost efficiency.



12 | Do you have **unified inventory management policies** throughout your supply chain?

Many supply chains are multi-level due to outsourced manufacturing and layers of suppliers and distributors. For optimum efficiency, optimizing your inventory levels across the entire supply chain, not just at a local level, is critical.

For example, with effective inventory management practices, you can reduce safety stock levels at each stage of your supply chain - from raw materials to work-in-process and finished goods - at your warehouses and your suppliers'.

By considering the complete supply chain, you can turn more inventory and tie up less capital.

If you also hold stock across a network of warehouses, it's important to consider inventory levels across the entire network and not for each specific facility. This allows you to move stock from warehouses with excess stock to those at risk of stockouts.



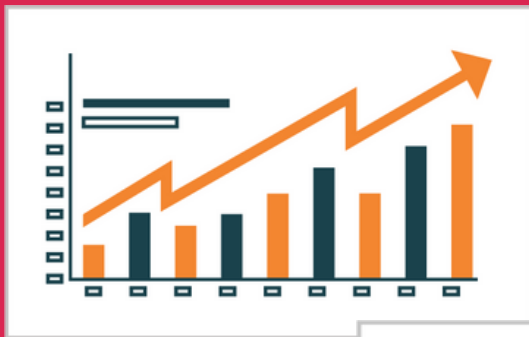
Don't just manage it; optimize it!

Fact: sophisticated inventory management processes are no longer an option; they're a necessity. If you can't serve your customers effectively, your business will struggle to stay competitive or support growth initiatives.

If you've struggled with any questions in this inventory health self-assessment, you probably need inventory optimization software to support your current inventory management processes and ERP system.

EazyStock can help.

Contact us today for a demo of how our software can automate your forecasting, inventory optimization, and replenishment needs.



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**Learn more about
automated inventory
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