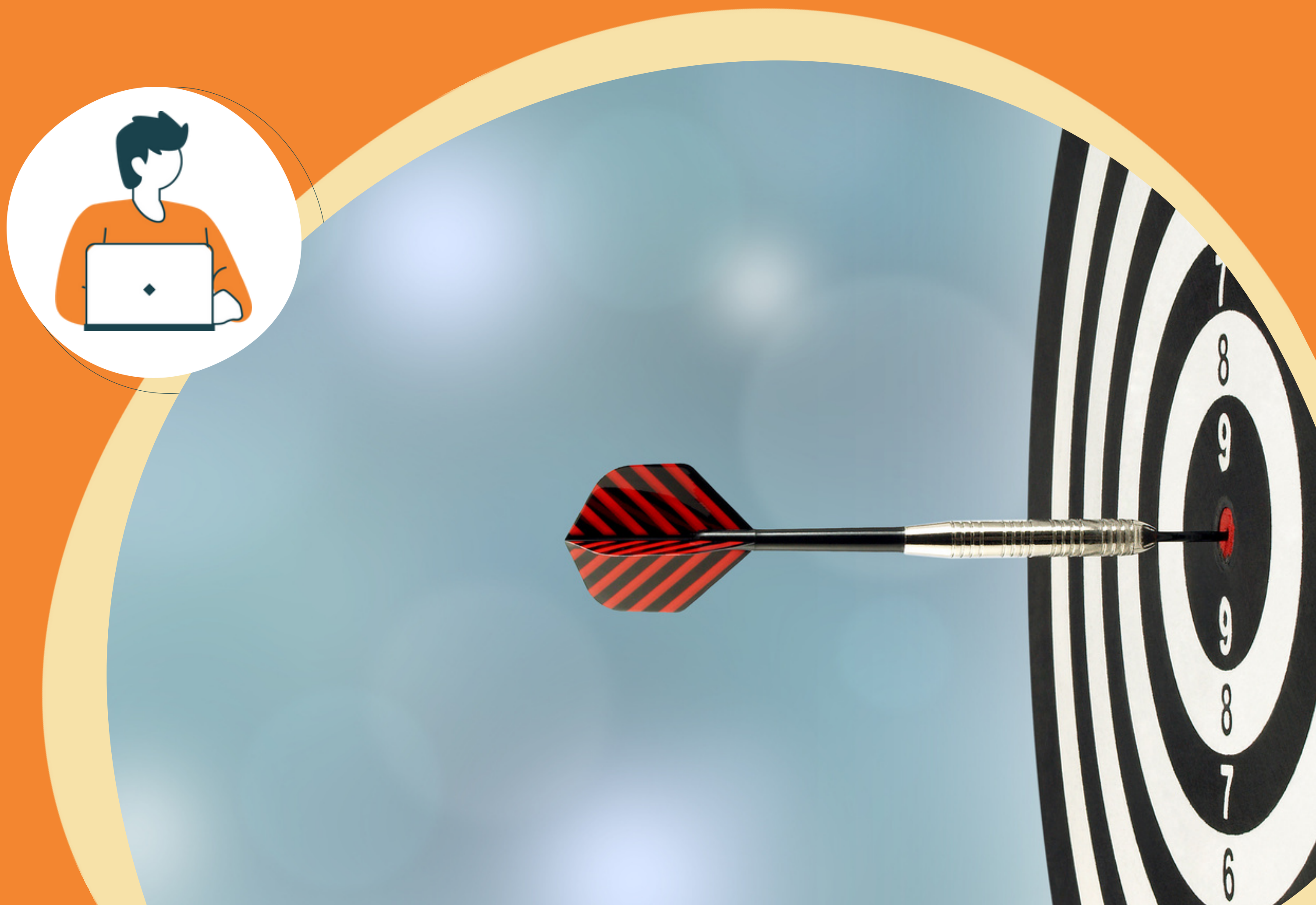
eazystock

eazystock.com

A guide to EazyStock's key performance indicators

Six KPIs you can't be without



Contents

An introduction to key performance indicators (KPIs)

Key performance indicators (KPIs) are measurable values that demonstrate how effectively a company achieves its key business objectives. Put simply; they're a great way to tell how well you're doing.

KPIs have several distinguishing features:

- They are quantifiable, meaning they have a number attached to them.
- They are measured over a specific period.
- They are often compared against past performance metrics or agreed targets.

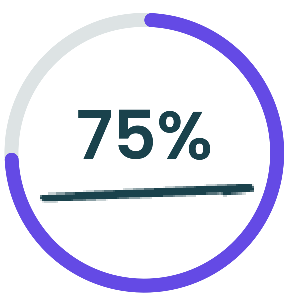
Why do you need KPIs?

Track performance

KPIs measure progress towards set goals and help identify areas for improvement.

Accountability

KPIs hold people accountable. By setting targets and tracking them throughout an established timeline, KPIs will indicate progress – or lack thereof.



Direction

KPIs help keep people working towards common goals to achieve success. They help align departments throughout an organization so everyone works towards one set of objectives.

Motivation

KPIs can help boost employee morale. Offering praise when you're performing well and feedback when performance needs to improve keeps everyone motivated towards the same goal.

Choosing the right KPIs

There are many KPIs to choose from when measuring inventory management ‘success’. So, how do you know where to start?

Understand your business goals

It’s important first to understand the overarching goals of your organization. What is its top priority? Customer service? Expansion? Diversification? Understanding your company’s main focus or business plan will help you set meaningful KPIs.

SMART goals

SMART goals make it easier to create actionable steps towards achieving success. SMART goals are specific, measurable, achievable, relevant, and timely. So instead of saying, “we’d like to increase our service level”, it becomes, “we’d like to increase our service level by 7% by the end of the next quarter”.

EazyStock's KPIs

The KPIs you set to measure your supply chain performance are integral to the success of your business. At EazyStock, we have over 20 years' experience in inventory management best practice, and over this time, we've defined six key metrics that we believe best measure stock performance.

We believe that by focusing on these KPIs, you can optimize your inventory levels and improve stock availability, which will ultimately improve supply chain efficiency. This eGuide will walk you through each KPI.

While many KPIs look at stock management, at EazyStock, we believe the most important are those that show how well you're optimizing your inventory. Why? Because stock outs and, conversely, excess stock cause a wealth of problems, from financial constraints to lost sales and dented profitability.

EazyStock inventory optimization software is designed to optimize your inventory levels by improving demand forecasting, inventory classification and replenishment activity. To track and measure how well the software is performing (and consequently how well you're managing your inventory levels), we focus on six fundamental KPIs:

01 **Service level**

02 **Service index**

03 **Sales order fulfillment**

04 **Stock turn**

05 **Stock value**

06 **Sales value**

Service level

At EazyStock, we believe service level is one of the most important KPIs to track and measure.

Service level is another term for 'stock availability' - ensuring items are regularly available. Service level 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) were met from the inventory on hand.

Your service level is important, as it's linked to how well you can serve your customers with on-time deliveries.

Any out-of-stock item, even just one SKU, will lead to an incomplete order, which can be detrimental to customer satisfaction. The service level KPI, therefore, closely correlates with customer service, acquisition, loyalty and retention. If products are out of stock, customers can easily go elsewhere and never return. It can also spark negative reviews that could jeopardize future customers.

You should set service-level targets for every SKU in your product portfolio. When deciding on a target, you need to consider how important the stock item is to your business (how much revenue or profit it makes) and its forecasted demand and level of volatility. For example, profitable products that constantly sell well should have a high service level of around 99%, while unprofitable goods with intermittent demand could have a lower service level of around 85%. ABC analysis or other inventory classification models can be used for this.

With your service levels set, you need to track them as order transactions occur and report on the actual figure against the target.

Here’s an example:

Dave’s DIY shop had 90 paintbrushes in stock.

Initially, he had an order for 40. As he has the stock to fulfill this order, his service level was 100%.

He then had an order for 60 brushes. As he'd already sold 40 from the 90 he had in stock, he could only supply 50 from his current inventory.

His service level, therefore, dropped to 50%, as he could only fulfill one of the two transactions.

Remember: Service level is not the same as order fill rate; the order fill rate in this case would be 90/100 x 100 = 90%.

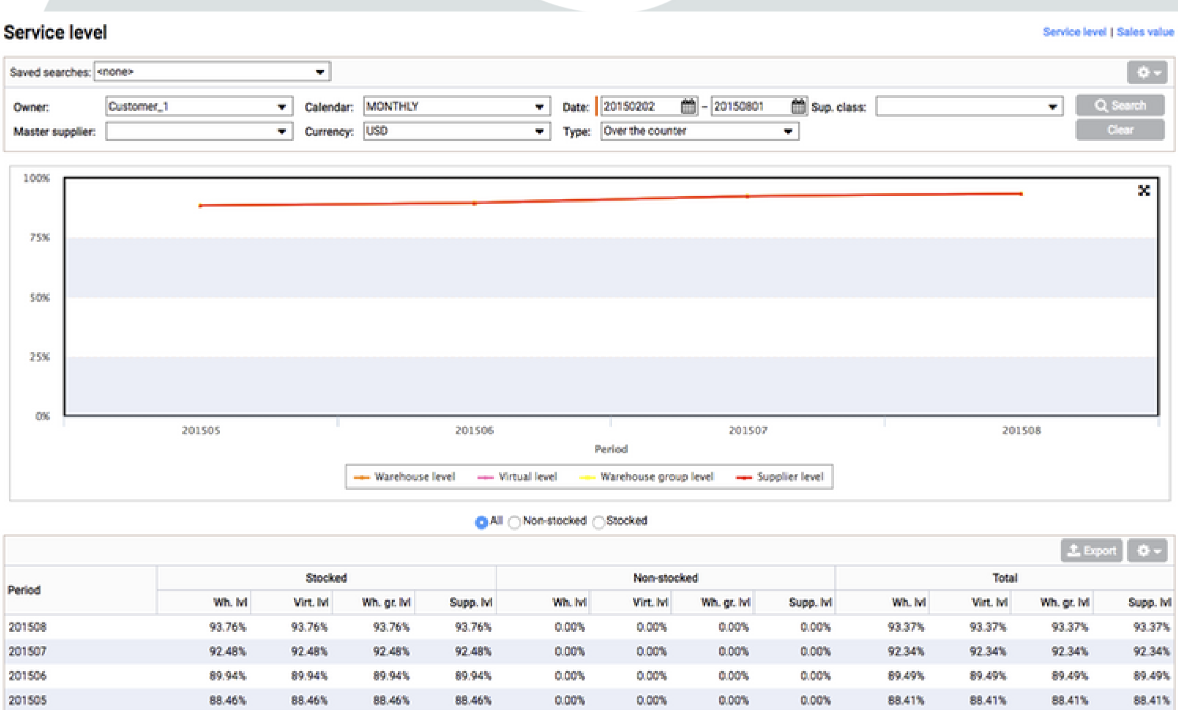
If Dave had received 10 orders for 10 brushes instead, the service level would have been 90%, as he could fulfill nine out of the ten orders (the fill rate would be the same).

Service level and EazyStock

Service level is an essential KPI in EazyStock. The software sets service level targets based on an item's value (annual consumption value), its forecasted demand in the upcoming order cycle, its demand volatility and frequency of picks.

It then uses the service level targets to set inventory parameters, such as reorder points, safety stock levels and order quantities, to ensure demand can be fulfilled and the risk of a stockout is minimized.

Here is a screenshot of EazyStock's service level report:



Period	Stocked				Non-stocked				Total			
	Wh. lvl	Virt. lvl	Wh. gr. lvl	Supp. lvl	Wh. lvl	Virt. lvl	Wh. gr. lvl	Supp. lvl	Wh. lvl	Virt. lvl	Wh. gr. lvl	Supp. lvl
201508	93.76%	93.76%	93.76%	93.76%	0.00%	0.00%	0.00%	0.00%	93.37%	93.37%	93.37%	93.37%
201507	92.48%	92.48%	92.48%	92.48%	0.00%	0.00%	0.00%	0.00%	92.34%	92.34%	92.34%	92.34%
201506	89.94%	89.94%	89.94%	89.94%	0.00%	0.00%	0.00%	0.00%	89.49%	89.49%	89.49%	89.49%
201505	88.46%	88.46%	88.46%	88.46%	0.00%	0.00%	0.00%	0.00%	88.41%	88.41%	88.41%	88.41%

Service index

While the service level KPI is a measure of historical lost sales, the service index looks forward, asking, “Do I have enough stock of the right stock to meet demand?”.

Some businesses find it difficult to measure sales that never took place. For example, if a product is not on the shelf, how do you know how many people would have bought it? Service level, therefore, only works when businesses record every order, whether it’s fulfilled or not.

In all other instances, the service index KPI can be used to see if you can meet forecasted demand from your current inventory levels.

As previously discussed, any out-of-stock item, even if it’s just one SKU, will lead to an unfulfilled order, which can be detrimental to customer satisfaction. The service index KPI is also, therefore, closely correlated with customer satisfaction.

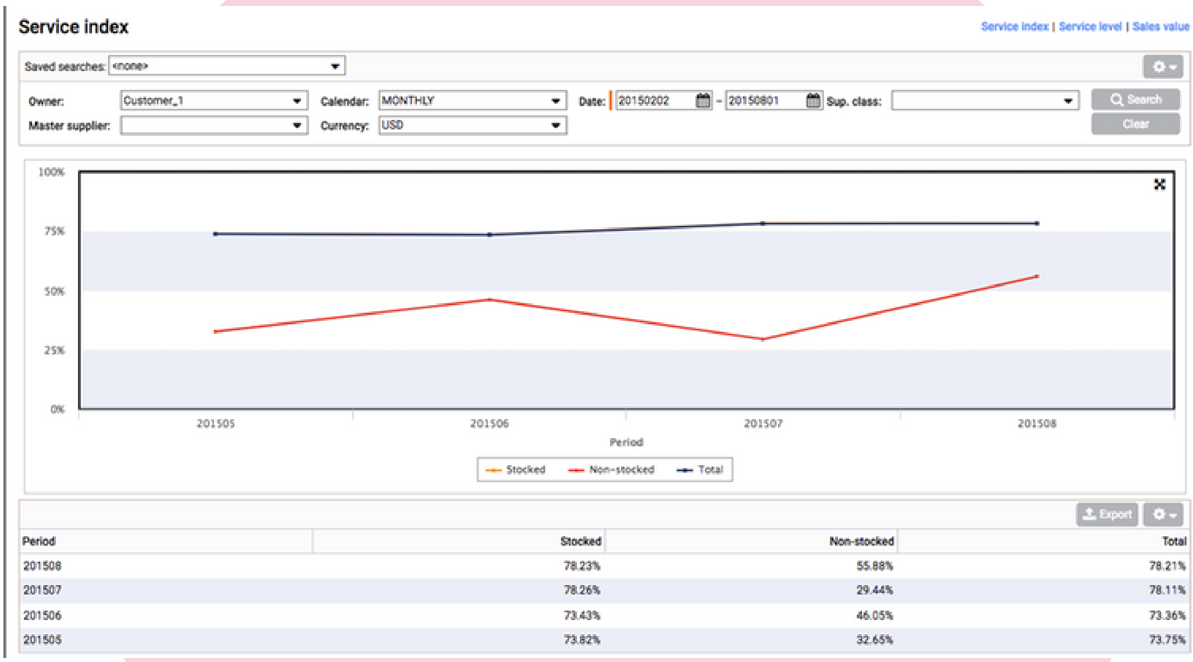
By measuring if you have enough stock on hand compared to your forecast, you'll determine how well you can fulfill demand. Service index also helps indicate which SKUs you'll need to replenish to meet your forecasted demand.

Here's a simple example of how to calculate service index at an aggregated level:

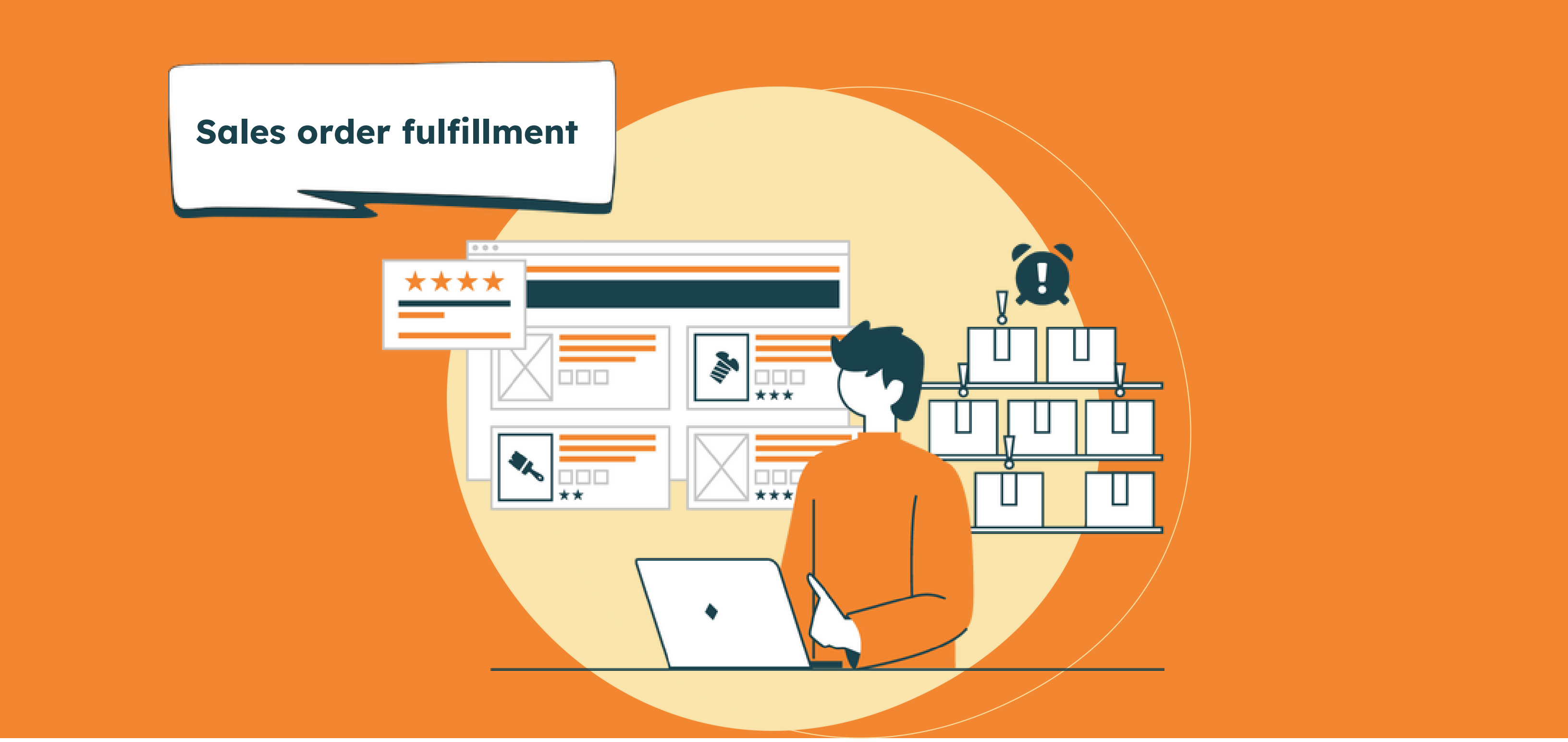
Items in warehouse	Forecasted demand	In stock	Service index
Emulsion paint	550	650	1
Gloss paint	270	110	0
Primer	150	150	1
White spirit	500	550	1
Sandpaper	330	160	0
Paint brushes large	250	450	1
Paint brushes medium	270	275	1
Paint brushes small	370	573	1
Paint rollers	220	108	0
Tape	265	134	0
Total	**3175**	**3160**	**6**
Service Index			**60%**

You can see that forecasted demand for six out of the ten items can be met, so the service index is 60%. However, you need to be careful, as the service index is only as accurate as the forecasted demand.

This screenshot of EazyStock's service index KPI shows how well the warehouse can cover the forecasted demand based on stocked, non-stocked and total items.



Period	Stocked	Non-stocked	Total
201508	78.23%	55.88%	78.21%
201507	78.26%	29.44%	78.11%
201506	73.43%	46.05%	73.36%
201505	73.82%	32.65%	73.75%



Sales order fulfillment

This KPI looks at aggregated historical transactions and measures how well entire orders were fulfilled by showing the percentage of orders you complete. If you don't have 100% order fulfillment, you should review your demand forecasts to ensure they are as accurate as possible.

A simple calculation is:

$$\frac{\text{number of orders fulfilled}}{\text{total number of orders}}$$

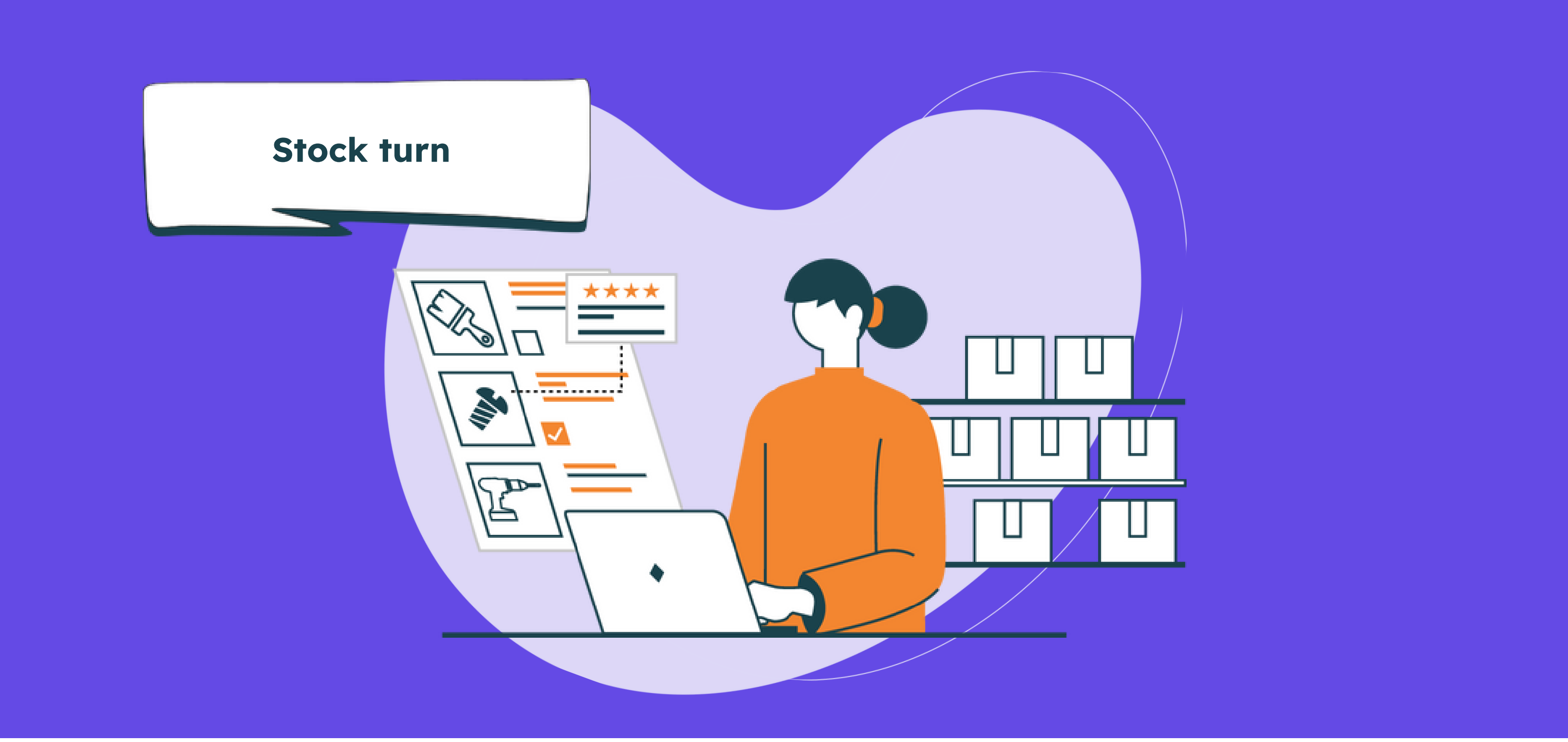
This works the same way for overall fulfillment - you divide the total number of items sent by the total number of items ordered.

In the example below, we look at three orders received by a paint manufacturer from three different retailers. They could meet all of order 1 but couldn't supply all items in orders 2 and 3.

	Ordered	Received	Missing items
Order 1 - Jane's DIY shop			
Emulsion paint	150	150	0
Gloss paint	70	70	0
Primer	40	40	0
Total items	**260**	**260**	**0**
Order 2 - John's paint shop			
Emulsion paint	100	100	0
Gloss paint	50	40	10
Primer	20	20	0
Total items	**170**	**160**	**10**
Order 3 - Dave's decorating shop			
Emulsion paint	300	300	0
Primer	90	80	10
Total items	**390**	**380**	**10**
Total	**820**	**800**	**20**

Even though the manufacturer's overall fill rate is 98% because they could supply 800 of the 820 items ordered, their sales order fulfillment rate is only 33% because only one of three orders was complete.

If missing 10 of each order will cause John and Dave issues, such as missed sales, they might need to source from another supplier. They might permanently take their business to an alternative supplier if this is a regular occurrence.



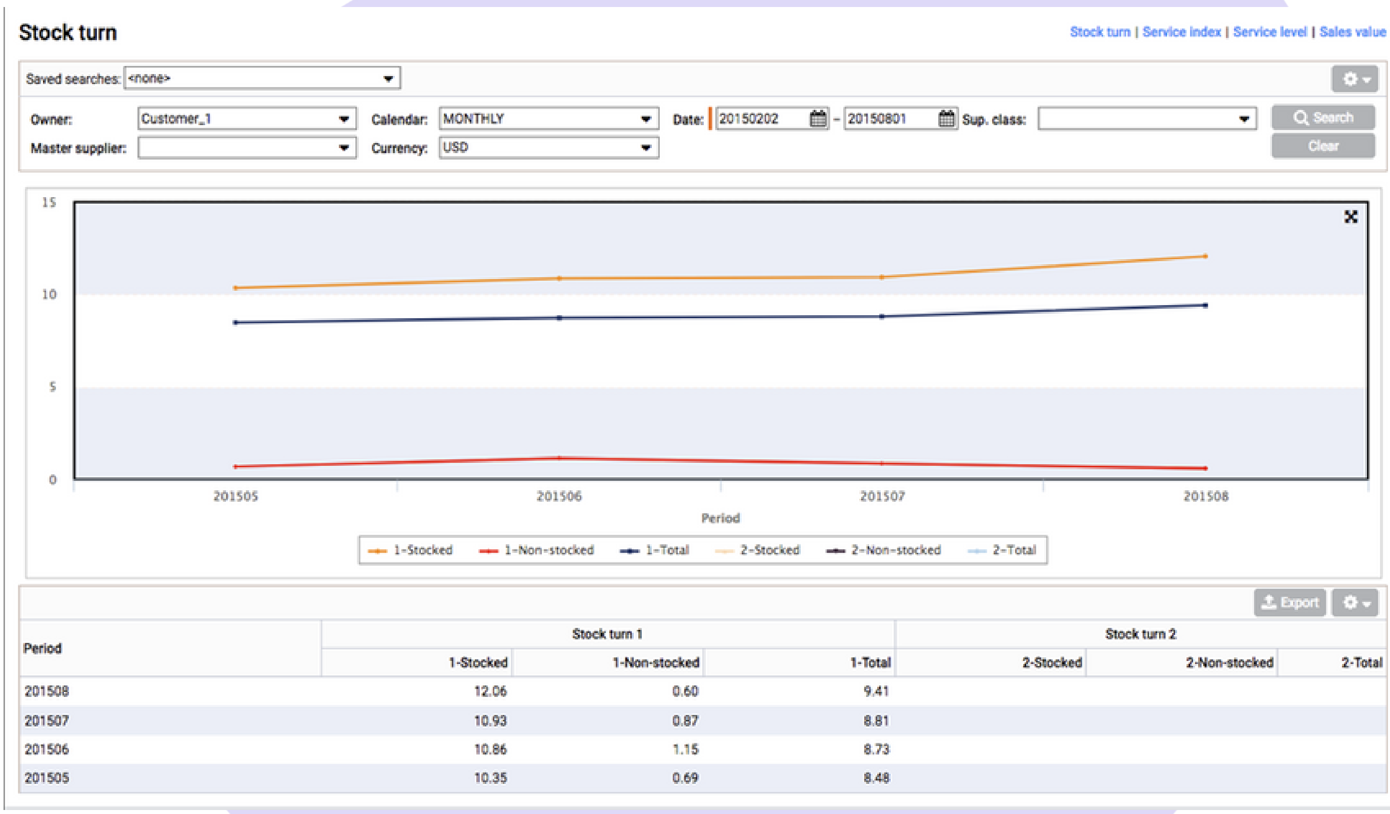
Stock turn

Stock turn measures how often you turn over your inventory within a given period. For example, how often a group of items enter and leave the warehouse annually.

This is a useful KPI as it indicates how optimized your inventory levels are, e.g. whether you're stocking the right items to meet demand. For example, a low stock turnover could suggest that you're overstocking on slow-moving items, which can lead to excess and obsolete inventory. In contrast, a very high stock turnover might indicate that you need to invest more in your bestselling items to keep service levels high and avoid stock outs.

Businesses with fast-moving goods should have a higher stock turnover than those with slow-moving items.

This is a screenshot of EazyStock's stock turn KPI based on stocked, non-stocked and total items.



Period	Stock turn 1			Stock turn 2		
	1-Stocked	1-Non-stocked	1-Total	2-Stocked	2-Non-stocked	2-Total
201508	12.06	0.60	9.41			
201507	10.93	0.87	8.81			
201506	10.86	1.15	8.73			
201505	10.35	0.69	8.48			

Stock value

Quite simply, stock value is the total value of your current inventory. You can take this number from a stock audit, a real-time warehouse management system (WMS) or an enterprise resource planning system (ERP).

Stock value helps you manage how much capital you're investing in inventory, which can impact your working capital.

The more money you invest in stock, the less you have for other business-wide ventures, such as sales and marketing projects, automation or growth.

This KPI also highlights the overall health of your inventory.

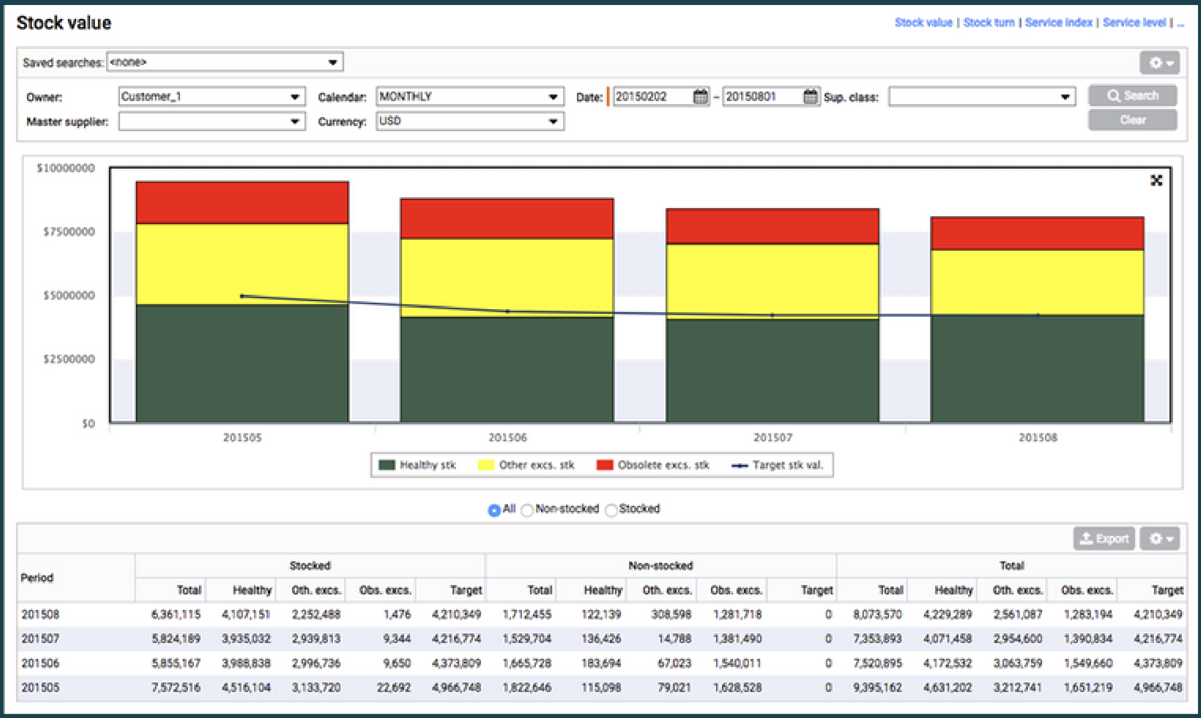
A super high stock value could indicate excess or obsolete stock that is tying up capital unnecessarily.

Alternatively, a super low stock value could mean you need to invest in more SKUs to cover demand.

The main goal of measuring stock value is ensuring that the bulk of your inventory comprises ‘healthy’ SKUs, i.e. those that bring your business the most value.

You determine the right level of healthy stock from each product’s forecasted demand, demand volatility, desired service levels and supplier lead times.

This is a screenshot of EazyStock’s stock value KPI. The items are sorted into healthy stock (green), excess stock (yellow), and obsolete stock (red). While the overall stock value is reducing (freeing up capital), we can see that healthy stock is growing, while excess and obsolete stock are shrinking.



Period	Stocked					Non-stocked					Total				
	Total	Healthy	Oth. excs.	Obs. excs.	Target	Total	Healthy	Oth. excs.	Obs. excs.	Target	Total	Healthy	Oth. excs.	Obs. excs.	Target
201508	6,361,115	4,107,151	2,252,488	1,476	4,210,349	1,712,455	122,139	308,598	1,281,718	0	8,073,570	4,229,289	2,561,087	1,283,194	4,210,349
201507	5,824,189	3,935,032	2,939,813	9,344	4,216,774	1,529,704	136,426	14,788	1,381,490	0	7,353,893	4,071,458	2,954,600	1,390,834	4,216,774
201506	5,855,167	3,988,838	2,996,736	9,650	4,373,809	1,665,728	183,694	67,023	1,540,011	0	7,520,895	4,172,532	3,063,759	1,549,660	4,373,809
201505	7,572,516	4,516,104	3,133,720	22,692	4,966,748	1,822,646	115,098	79,021	1,628,528	0	9,395,162	4,631,202	3,212,741	1,651,219	4,966,748

Sales value

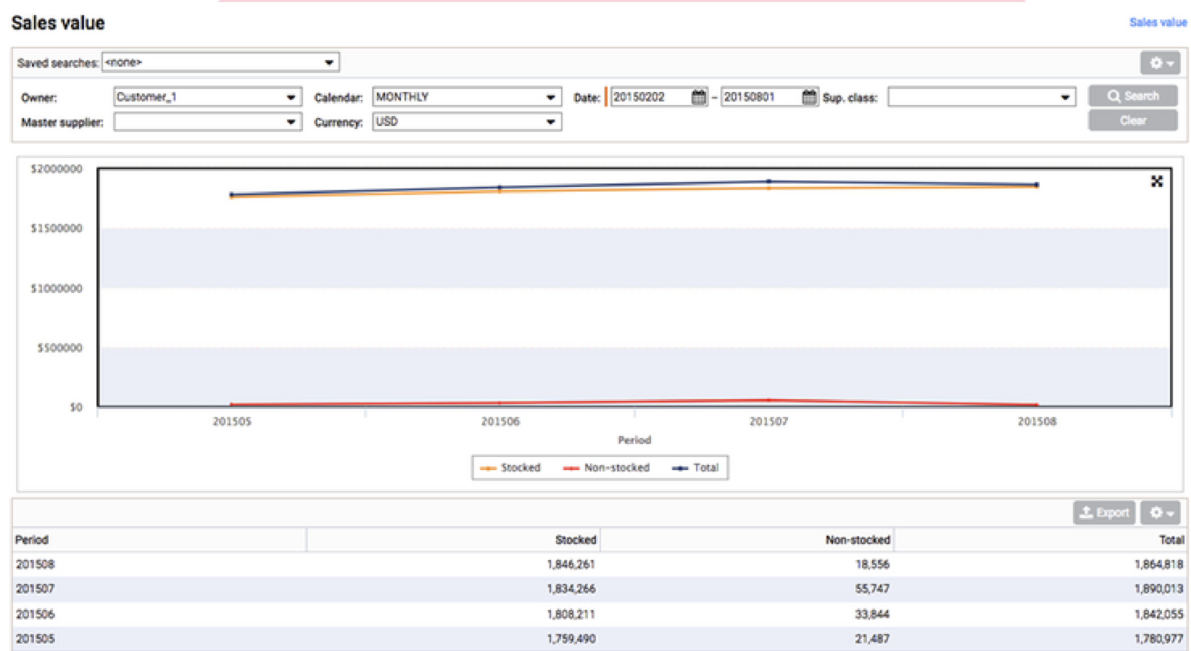
This is the total value of the sales from your inventory. This KPI helps you ensure that your sales match the size of your inventory.

You should calculate sales value based on the unit cost of the goods sold, not their sales price (as prices can fluctuate depending on market dynamics).

volume of sales x unit cost

Sales value indicates how well you respond to the other KPIs in your supply chain and adjust your processes accordingly. For example, if you improve your service level, it would make sense to see an increase in your sales value due to better stock availability reducing lost sales and enabling you to meet the demand of happy returning customers. You can investigate why and rectify the issue if this isn't the case.

This screenshot of EazyStock's sales value KPI dashboard shows the value of stocked items being sold against non-stocked items being sold and the overall value of sales.



Period	Stocked	Non-stocked	Total
201508	1,846,261	18,556	1,864,818
201507	1,834,266	55,747	1,890,013
201506	1,808,211	33,844	1,842,055
201505	1,759,490	21,487	1,780,977

Focusing on inventory optimization KPIs

Inventory availability is a critical driver of business success, helping drive sales, customer satisfaction, retention and loyalty. The best KPIs to ensure stock availability are those focused on inventory optimization.

It doesn't matter how quickly a business can manufacture goods, move them through the supply chain, pick, pack or deliver them if they don't have the right products in stock at the right time to meet demand.

EazyStock's six inventory management KPIs will ensure this is your focus.

Setting and tracking these KPIs is easy with an inventory optimization tool like EazyStock. The software does all the hard work, using complex algorithms to provide statistically accurate forecasts and targets. It then uses this data to set replenishment parameters and generate orders, constantly focusing on meeting demand while holding the lowest possible stock levels.

Using software to automate setting and tracking KPIs also saves valuable time and resources, which enables inventory management teams to be more strategic and concentrate on value-adding activities.

With your KPIs constantly being monitored, you'll have a wealth of data at your fingertips to adjust processes and make informed decisions that will keep your business operationally efficient and financially better off.

eazystock

Learn more about inventory optimization

Book a demo