tradegecko

Inventory Management: **Everything you need to know**

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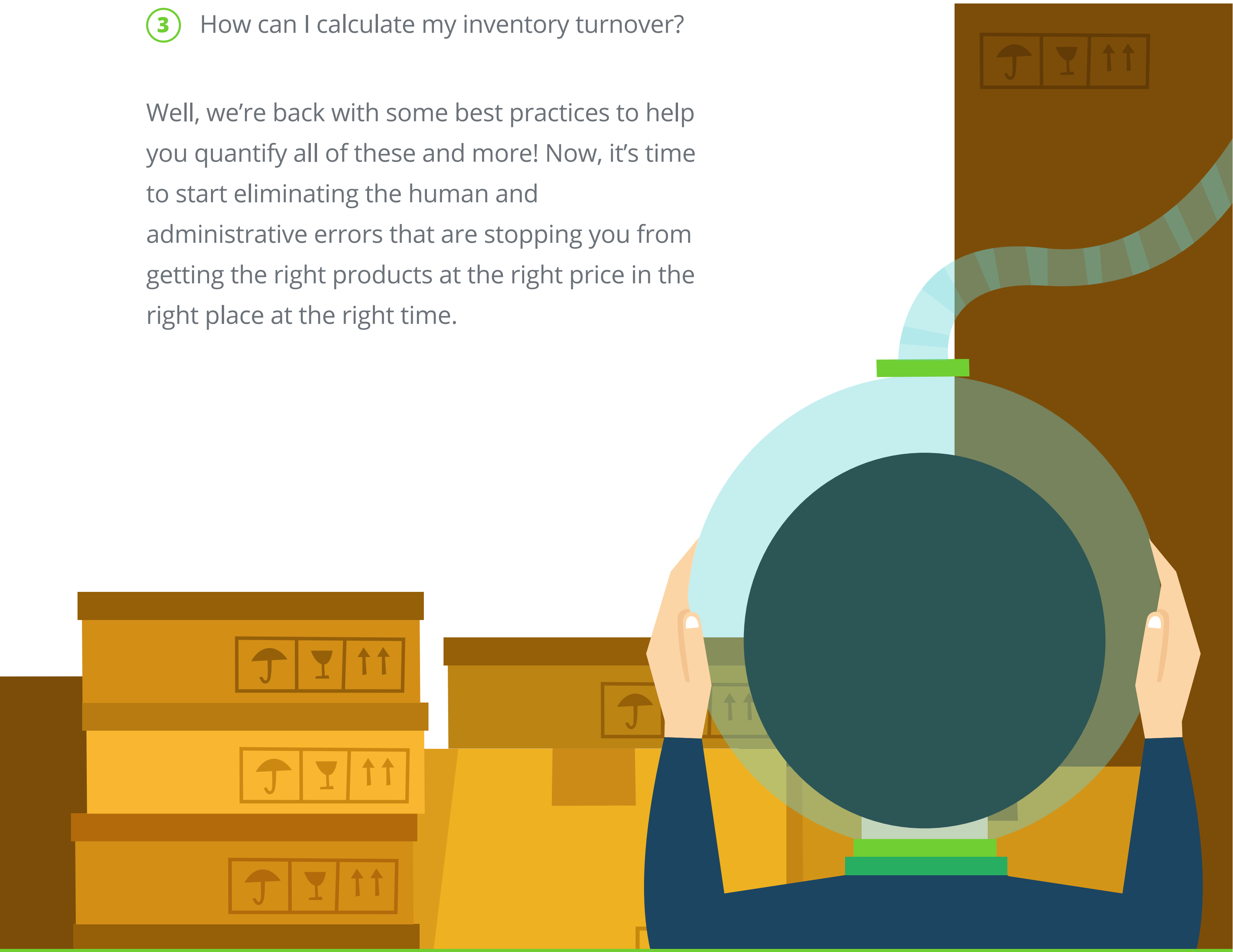
Inventory Management: A deeper dive

A while ago, we released Inventory Management: Getting Started, an introduction to basic inventory management concepts for your eCommerce business.

Now, it's time to delve deeper into these concepts and sharpen your inventory management game. While reading Getting Started, you may have wondered:

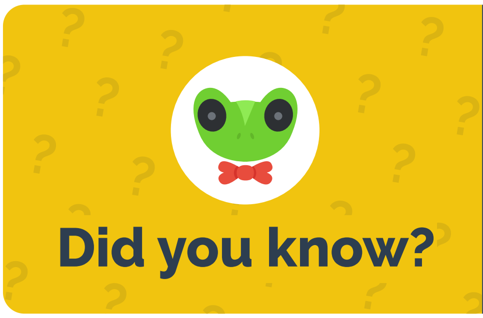
1. How do I calculate my safety stock?
2. What's my reorder point?
3. How can I calculate my inventory turnover?

Well, we're back with some best practices to help you quantify all of these and more! Now, it's time to start eliminating the human and administrative errors that are stopping you from getting the right products at the right price in the right place at the right time.



The way forward: A perpetual inventory system

Most people begin their inventory management journey with spreadsheets and paper. But it's not easy to scale spreadsheets to keep up with your business as you start selling more and more!



55% of SMB owners save more than 5 hours a week, of which 16% save more than a day's work with inventory management software (like TradeGecko!) [1]

Calculating inventory changes at the end of every work day would take forever, so businesses tend to adopt a periodic inventory system. Tracking inventory changes periodically will save time, but also reduce your visibility and control over your inventory.

Which means if the numbers don't tally, it'll be harder to track when the error occurred. If that's happened to you, it's time to think about switching to an inventory management software solution, like TradeGecko.

Switching to a perpetual inventory system means you'll get accurate reflections of inventory levels at all times. And with better visibility and control, it'll be easy to track down and remedy any errors you encounter.

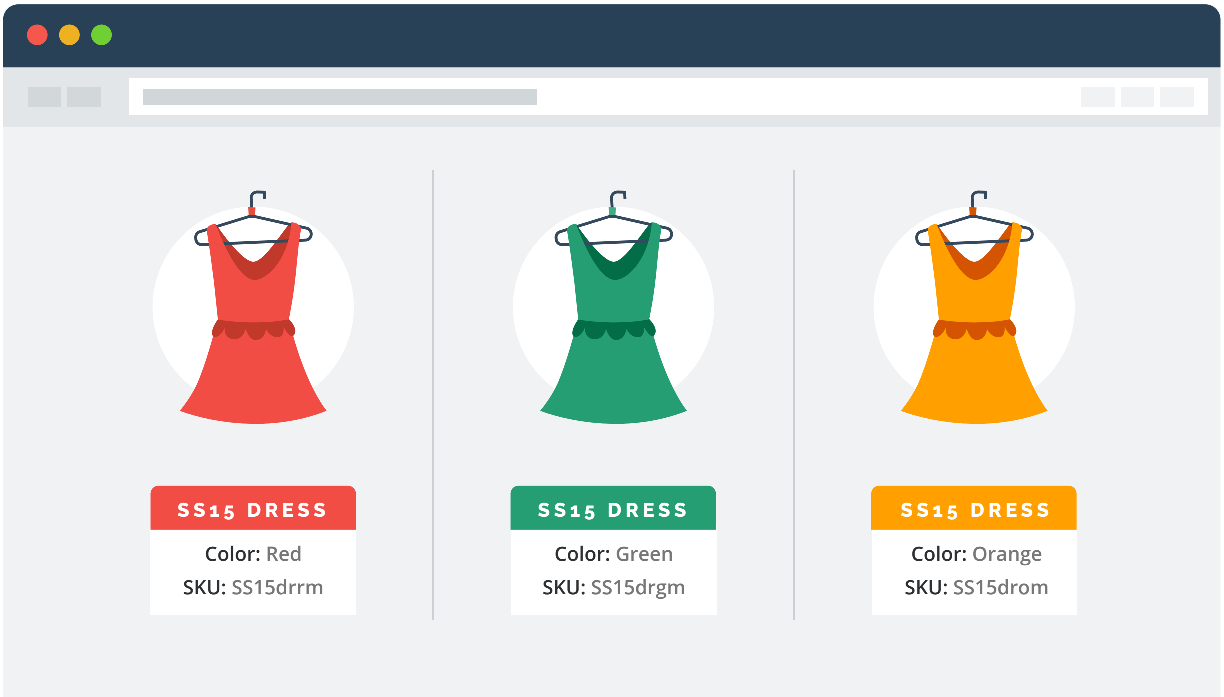
Sources: *[1] GetApp*

1.1 SKUs: The building blocks

You'll want to start by devising an alphanumeric Stock Keeping Unit (SKU) system. SKUs are product codes that'll let you search and identify stock on hand from orders and invoices.

With these, you'll be able to easily track your inventory movement right down to individual variants of every product (color, size, etc.).

With a good SKU system, you'll be able to minimize opportunity for theft. When products are narrowed down to SKUs that denote a small number of items... it becomes harder for things to just disappear.



A SKU system should improve the responsiveness and effectiveness of fulfilling orders. If you're looking for some tips on what to consider when creating your SKU system, read on!

AVOID USING LETTERS THAT LOOK LIKE NUMBERS, ALONG WITH SPACES, ACCENTS, AND SYMBOLS

This is pretty straightforward. Using all these can confuse your inventory system and result in unintended consequences.

MAKE THEM EASILY UNDERSTANDABLE

SKUs record important product information, so feel free to use letters where applicable for colors, size, type, and seasonal variants. (eg. When describing a red dress, size medium for Spring/Summer ‘15, isn’t SS15DrRM easier to understand than 151930205?)

ARRANGE CHARACTERISTICS ACCORDING TO IMPORTANCE

Think of how you would describe a product in order of defining characteristics -- beginning with the year/season can help you restrict searches to the right period, followed by less distinctive attributes like color.

1.2 Inventory categorization: What's hot and what's not?

Once you've got your SKU system up and running, you'll be able to determine the popularity of different products and their variants.

We introduced ABC analysis and the Pareto principle in Getting Started, and now we want to show you how to apply this to your business. To refresh your memory, the Pareto principle works on the assumption that 80% of consumption is based on 20% of the products, while the ABC analysis goes like this:

A

A-Items

The top sellers with the highest annual consumption value

B

B-Items

These are of medium consumption

C

C-Items

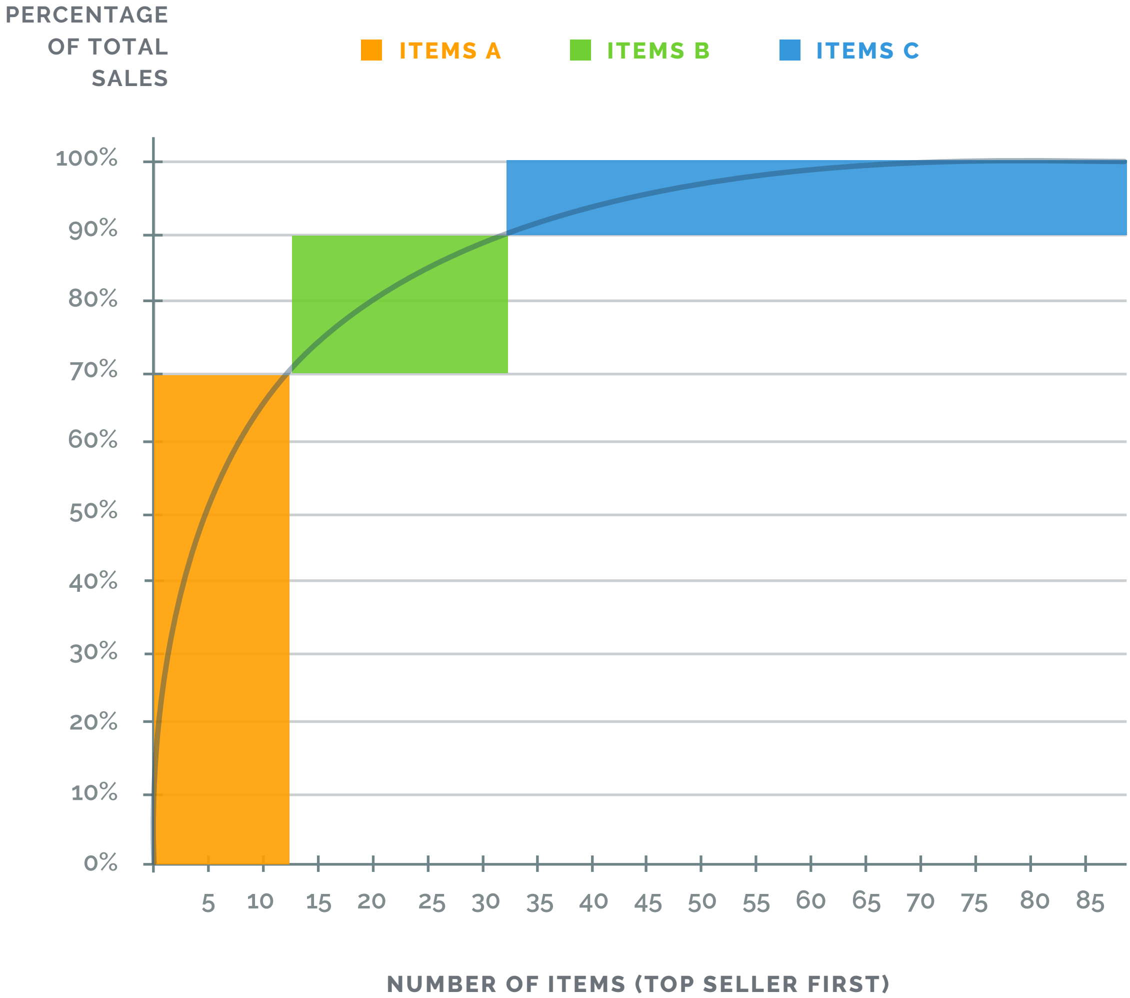
These are of low consumption value

Knowing this will help you to decide what products are worth investing in and which aren't. However, don't just ignore your C-Items because:

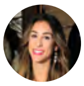
THEY MAKE UP A SIGNIFICANT AMOUNT OF YOUR INVENTORY

YOUR COMPETITORS ARE MORE INTERESTED IN THE TOP SELLERS - MAKING IT HARDER TO TURN A HIGH PROFIT MARGIN.

Looking to the long tail can provide you with an insight into the potential of these slower-moving products, and striking a balance between your A and C-Items will even out your cash flow and generate profits.



> *My favorite TradeGecko feature would be the intelligence reports. We've been able to analyze all the data of what our bestsellers were and not assume 'I know I sold this Coypu ring and this Backbone cuff and I think those might be the bestsellers' but to actually see the numbers is really great.*



ASHLEY PORTER, PORTER LYONS

2. Forecasting is a science, not magic

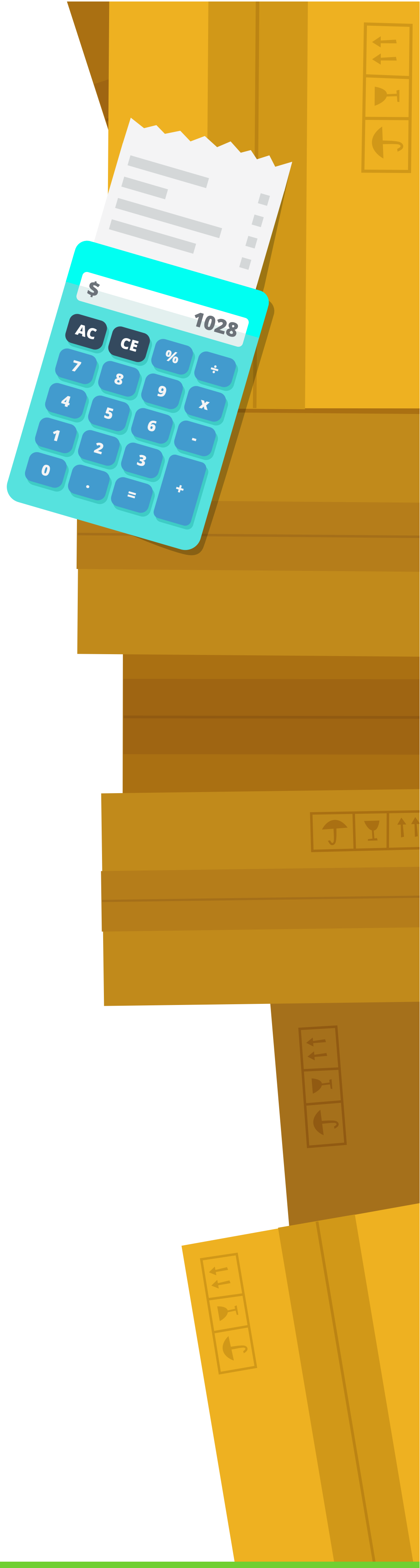
What goes into predicting next season's demand? Before getting into that, you'll need to set some boundaries. Here are some questions to help you out:

HOW LONG IS YOUR FORECAST PERIOD?

ACCORDING TO PAST SALES ORDERS AND REPORTS, WHAT'S YOUR BASE DEMAND LIKE?

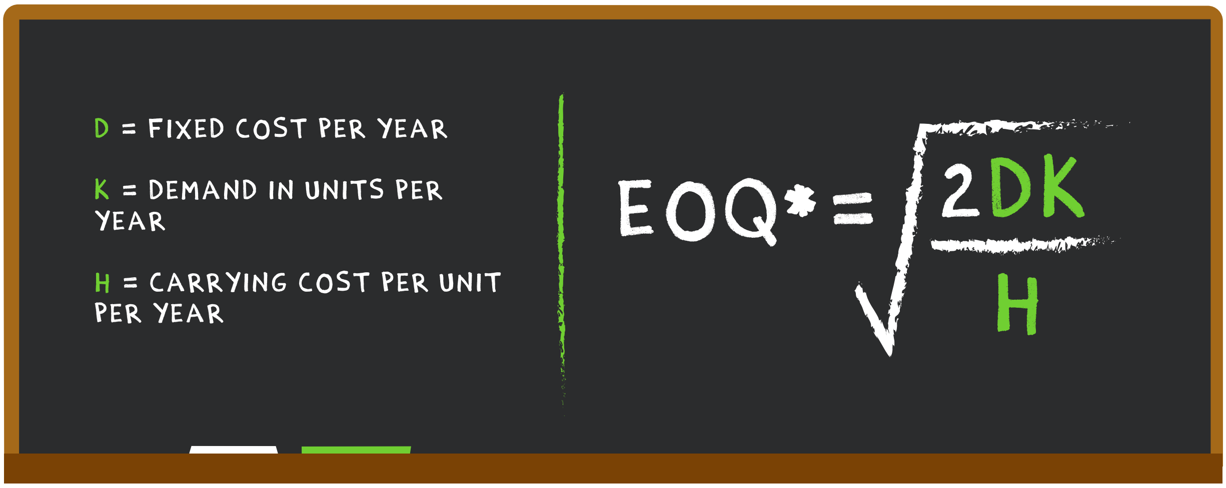
IS THERE ANY TREND THAT MARKS AN INCREASE OR DECREASE IN DEMAND OVER A CERTAIN PERIOD OF TIME?

Getting forecasting right will determine the right order quantities and reorder points, helping you ensure a high inventory turnover rate and optimize your inventory to reduce unnecessary spending.



2.1 Economic Order Quantity: The sweet spot

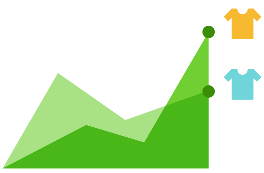
We introduced the **Economic Order Quantity (EOQ)** in Getting Started, and we'll be revisiting it here since it's a part of the forecasting process. The goal here is to decide the ideal order quantity that minimizes inventory costs while matching customer demand.



For this, you'll need your:

Annual Carrying Cost Per Unit

Carrying costs are the amount you spend on stuff like storage and utilities AKA the price you pay for carrying your stock.



Annual Demand

Look through your past records to figure out how much you've spent on procuring items and last year's demand.

Order Cost

Order costs are decided by the amount you have to spend to procure stock, taking the form of approval processes, inspections and so on.

But if you're just starting out, begin by asking for quotes and researching your competitors. At this stage, it's good sense to overestimate your costs and underestimate your demands by a bit - you can always figure out the correct numbers once you've got them.

It's understandable to want to overestimate your costs and err on the side of caution, but doing that too much can give you skewed results that may not reflect the situation, and these highly inflated results can lead you to make the wrong decision.

Overestimate the cost and you'll end up reducing your optimal order quantity in order to "balance" your high costs... and you'll end up running out of stock more often than you should.

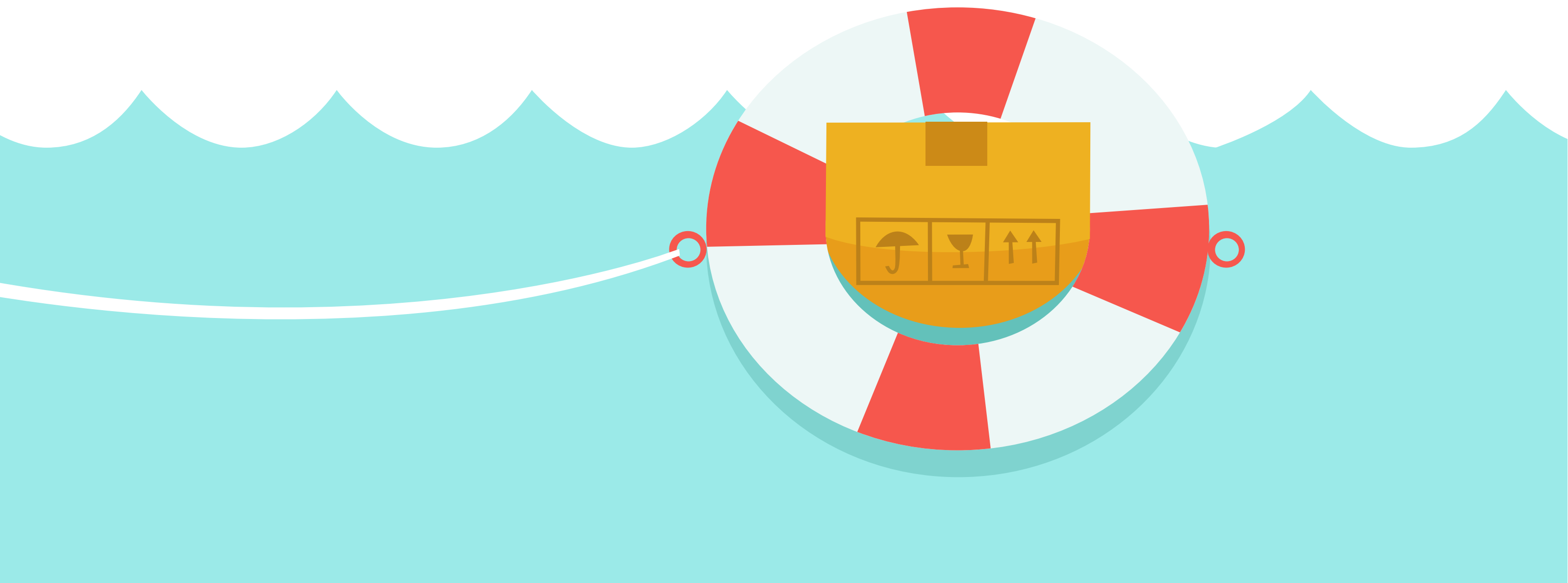
2.2 Safety Stock: For those rainy days

Even though you've got your ideal order quantity, you still need to brace yourself for unexpected circumstances... and here's where Safety Stock comes into play!

$$\text{SAFETY STOCK} = \left(\text{MAXIMUM DAILY USAGE} \times \text{MAXIMUM LEAD TIME IN DAYS}\right) - \left(\text{AVERAGE DAILY USAGE} \times \text{AVERAGE LEAD TIME IN DAYS}\right)$$

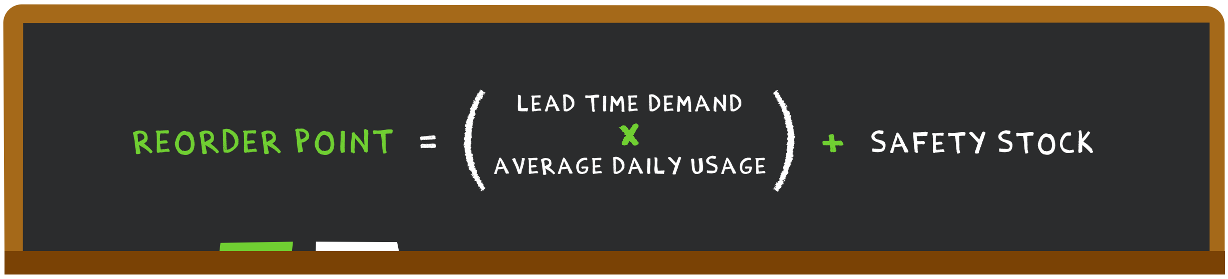
Carrying safety stock allows you to compensate for unexpected events (like high demand or supply chain disruptions) that can result in out-of-stock situations.

It's difficult to plan for unexpected events without veering into paranoia and squirreling away more than you'll ever need, but safety stock ensures you'll have at least enough to cover most of your vendor's lead time while waiting for a new shipment to arrive.



2.3 Reorder Point: Are we there yet?

The EOQ tells you how much to order, but not when to order. When figuring out the reorder point, you'll need to know the lead time and the estimated demand during that time so that you'll be able to replenish your inventory with just the right quantity to optimize the turnover rate.



Always make sure you set your reorder point to include your safety stock and don't wait to touch your safety stock before placing a replenishment order. With this, you'll have enough stock for your customers even when things take an unexpected turn.

If you're worried about missing the reorder point, it's time to look into getting an inventory management software system for your business. Once your stock levels hit the reorder point, it'll prompt you to place a new purchase order.

Did you know?

46% of SMB owners use information from previous months to decide when to reorder. [1]

Sources: [1] *GetApp*

2.4 Dead Stock: Killin' it

Dead stock covers all products that haven't had any sales over the past twelve months. With a constant stream of new products coming in, it's easy to forget about your old stock.

Just think about how much you're losing through carrying costs by choosing (inadvertently or otherwise) to continue holding on to dead stock.

Are the benefits of choosing to hold onto dead stock enough to outweigh the potential of freeing up that space to increase revenue? Probably not.

When in doubt remember that Elsa was probably singing about dead stock. "Let it go, let it go! Can't hold it back any more."

To save yourself from the financial strain of continually storing dead stock, we've come up with some tips to help you start cutting these from your warehouse.

Bundle it

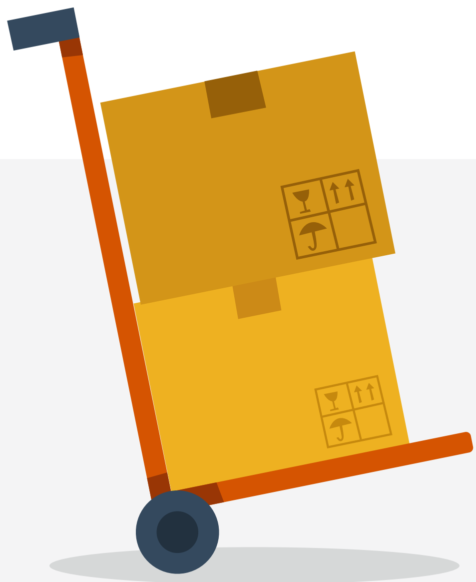
Bundle your slow-moving or dead stock with more current products, and sell these at a discounted price. While your profit margins may take a hit, at least you're moving a high volume of items and not spending on carrying costs.

Donate It

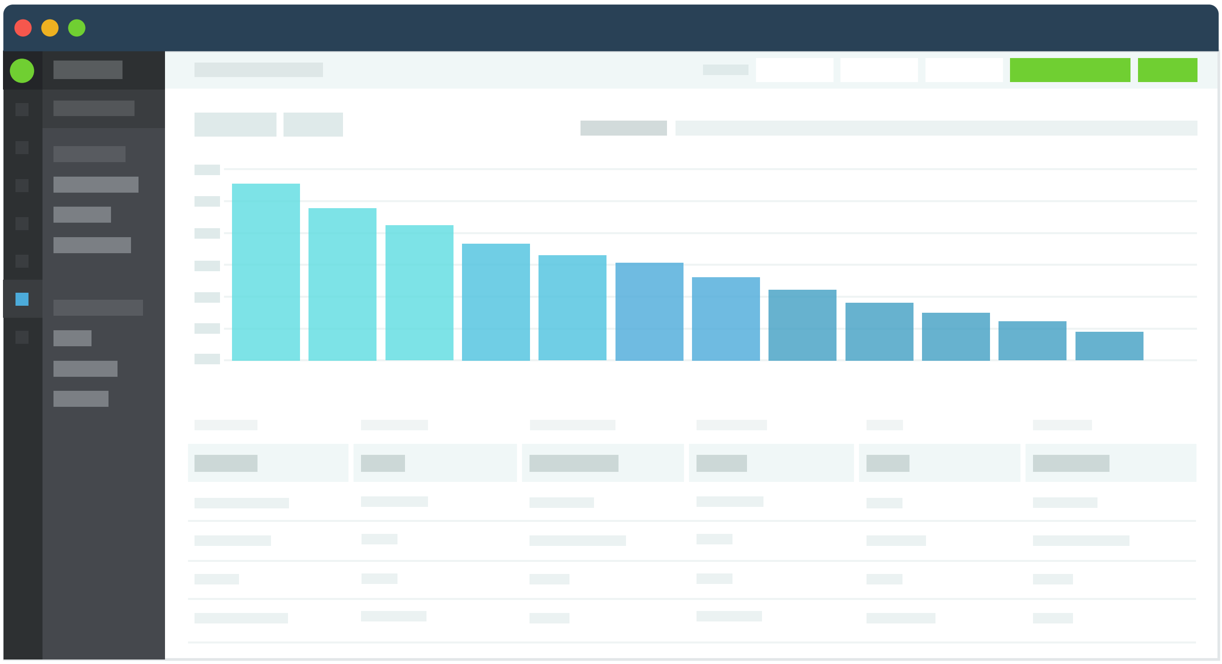
If you're in the United States, you'll be able to donate your dead stock to charity and claim a tax write-off. Signed receipts by the charity of your choice and your business will document the donation, and you get to deduct the market value for the inventory from your taxes after.

Sell it back to your supplier

Your supplier's return policy may let you return dead stock, but it's likely your supplier will refund you with credit rather than cash, and charge you a restocking fee.



Once you manage to clear out all the dead stock from your warehouse, it's time to work towards reducing the possibility of being saddled with dead stock in the future. So how do you know when to eliminate products from your inventory before they can turn into dead stock?



This is an example of an intelligence report

Inventory management software allows you to generate intelligence reports, tracking the performance of different products. You'll always know when something isn't selling well, and take the appropriate measures to phase out the product from your store's offerings.

And in the unlikely event of a sale, don't think the product has suddenly turned desirable again and deserves a fresh shipment!

As soon as you discover "dead" and "dying" stock, it's time to set these aside. Mark out a separate section of your warehouse for these items, and see how much space they're taking up... it'll give you a good incentive to get these products out of your door as quickly as possible!

3. Go big, Go Multichannel

When you're getting your retail business off the ground, you're likely to start with only one store.

As your business grows, you're likely to start looking into branching out into multichannel sales to reach more prospective customers. But when you're venturing into multichannel sales and managing inventory manually, the biggest headache you'll face is trying to sync your inventory across different platforms.

Using inventory management software can help you manage your inventory from one centralized location. All you need to do is update your products on it for the information to get pushed to all your eCommerce channels, from online stores to marketplaces.

With that, your inventory is synced across all sales channels so you'll always be able to keep an eye on stock movement everywhere and automate the following:

Did you know?

Of the respondents who use major eCommerce channels, approximately 70% of them choose Amazon. [1]

Sources: [1] *GetApp*

Sales Orders

Inventory management software also allows you to manage all your orders from one centralized location. This way, you won't need to allot a set amount of stock to each location and run the risk of selling out on one front even though you still have products to sell in your inventory.

Purchase Orders

As your sales orders come pouring in, you'll need to start sending out purchase orders to replenish stock. An inventory management software solution can make these time-consuming processes easy for you. It'll let you automate the creation of purchase orders at the reorder point.

Backorders

It's time to open backorders when you're facing greater demand than you can handle, and your stock is selling out fast. Backordering is the process of letting your customers shop your products in advance while you await a new shipment - so your customers go away satisfied and you still make the sale!

3.1 Shopping cart solutions: What's your flavor?

Setting up a shop has never been so easy. Compared to a brick-and-mortar store, the start-up cost of an online store is a lot lower. There are four major platform providers you can consider:

shopify

At between $14 - $179 a month, **Shopify** offers a range of plans. It has an easy-to-use interface, clean and customizable website designs, and secure payment gateways. Shopify also offers a Point-of-Sale system, that'll let you process credit card payments anywhere.

Magento

Magento's great if building an online store custom-made to your specifications is your end goal since it's open-source software. As you're scaling up, you may soon start realizing that you need to customize aspects of your online store to better suit your business.

Bigcommerce

If you source stock from China, **Bigcommerce's** integration with Alibaba lets their sellers browse and buy wholesale products from 300 trusted suppliers. Bigcommerce also allows you to avoid paying the 1.5% transaction fee if you sign up for the 'plus' plan.

WooCommerce

If you have your own hosting and are familiar with WordPress, **WooCommerce** is the perfect match for you. It's a free plug-in that lets you add a shop and checkout pages to your WordPress page, allowing you to add and edit your products.

If you are unsure, start by selling on Amazon. Though not your personal storefront, Amazon's a great place to get started, especially if you're still figuring out your branding. Plus, you get access to the millions of customers that flock to Amazon to buy everything under the sun (and then some!).

3.2 Fulfillment: Get your ship together

Your sales orders are rolling in and you're ready to fulfill them.

For the uninitiated, dealing with courier companies, shipping labels, and other fulfillment related aspects can be tricky. So we've come up with a list of different ways to ensure your products get to your customer safely, with minimum hassle:

1. Fulfilled By Amazon (FBA)

Amazon sellers can ship their inventory direct to Amazon, who handles all the packing and shipping details once an order is placed.

Amazon is also extending its FBA services to other sales channels. An Amazon FBA user can fulfill sales orders created through other eCommerce platforms from a single pool of inventory in Amazon's fulfillment centers.

2. 3PL (3rd Party Logistics)

Retailers can outsource operational logistics from warehousing to delivery. Using a 3PL provider allows retailers to focus on what really matters... instead of tying up your time with managing day-to-day operational logistics.

If you're planning to go international, that's just one more reason to give 3PL a shot. 3PLs can help you with matters of international logistics such as:

- Documentation and customs
- Import duties and taxes

3.3 Integrations: It's a match!

Any platforms and systems you choose shouldn't just work seamlessly together, but complement each other.

You'd want your integrations (from forecasting to accounting to shipping) to be compatible and integrate easily with each other. Many of these are located in the cloud, which comes with its own set of perks:

Scalability

Cloud-based software lets you pay for only what you need... and as your business grows, it offers you the possibilities of adjusting the resources available to suit your needs.

SaaS

Also known as "Software as a Service". You won't need to invest in building new system infrastructures or hire specialized staff to manage these servers - instead, everything can be easily accessed from a web address.

Open APIs

Also known as "Application Programming Interface". It means interested companies can create integrations, allowing users to connect different integrations in a user-friendly manner.

Together, these will give customers access to a comprehensive, full-featured set of applications to automate various business processes, which will improve overall efficiency (and of course, profits and revenue!).

4. Success! Time for a weigh-in

You know your products are selling well... but:

CAN YOU QUANTIFY HOW WELL THEY'RE DOING?

DO YOU KNOW HOW YOUR SALES COMPARE TO YOUR COMPETITORS?

ARE YOUR ACCOUNTS IN ORDER?

We've put together 9 crucial metrics that will help you identify areas with room for improvement and scale your business.

1. Average Inventory

Knowing your average inventory is necessary for you to calculate many of the following metrics. To calculate your average inventory, all you have to do is take the median value of your inventory over a certain time period, say, a year.

Using average inventory allows you to eliminate fluctuating seasonal trends from your calculations. If you stock more for the holiday season, this can result in a skewed picture of your inventory for that quarter.

Let's assume the table below details the inventory value for an independent company that sells watches, named J Timewear.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
$800	$820	$750	$870	$830	$700	$890	$920	$690	$760	$830	$1460

In this case, J Timewear's total inventory value for the year would clock in at $10,320.

$$\text{AVERAGE INVENTORY} = \frac{\$10,320}{12} = \$860$$

Divide the sum by 12 months, and J Timewear has an average monthly inventory value of $860.

2. Inventory Turnover

$$\text{INVENTORY TURNOVER} = \frac{\text{COST OF GOODS SOLD}}{\text{AVERAGE INVENTORY}}$$

The usual way of judging your business success is through calculating your inventory turnover. Inventory turnover is the amount of times your inventory is sold and replaced over a certain period (eg. a year).

If J Timewear's annual cost of goods sold is $8,600, you'd calculate the inventory turnover by taking $8,600 / $860 = 10. So in this case, you'd have sold and replenished your inventory 10 times over a year.

Instead of trying to put a number to your ideal inventory turnover, it's better to use inventory management software to ensure you have optimum amounts of every product on hand.

You know your inventory turnover needs work if :

- You're running out of stock regularly (too high!)
- You seem to have too much products on hand (too low!)

3. Average Days Needed To Sell Inventory

$$\text{AVERAGE DAYS NEEDED TO SELL INVENTORY} = \left(\frac{\text{AVERAGE INVENTORY}}{\text{COST OF GOODS SOLD}}\right) \times 365$$

Knowing how long it takes you to sell your inventory will give you an idea of your business's efficiency. The average days needed to sell inventory puts a number to your inventory turnover, showing you how long it takes for you to sell your average inventory. So, if J Timewear enjoys about $860/month in sales, and has spent about $8,600 over the year on purchasing stock, then it needs about 37 days to sell inventory.

$$(\$860/\$8{,}600) \times 365 = 36.5$$

Doing this will give you an estimate of how many days' worth of sales you have in your inventory at any given time - but be sure to factor in your lead time and safety stock. If you're selling out too quickly, you could be carrying insufficient stock. If it's taking you too long to sell your inventory, you're probably stocking too much, or holding too much slow-moving stocks.

4. Inventory write-off

Sometimes, a retailer has no choice but to conduct an inventory write-off, formally recognizing that part of a company's inventory no longer has value. These include:

- MISSING ITEMS (CAUSED BY ADMINISTRATIVE ERRORS OR THEFT)
- EXPIRED PRODUCTS
- UNEXPECTED DISASTERS LIKE WAREHOUSE FIRES OR FLOODING.

A small amount of inventory write-off every year is to be expected, but if large amounts are being written off regularly, it may be time for a company to review its inventory management policies.

5. Return On Investment (ROI)

$$\text{RETURN ON INVESTMENT} = \frac{\left(\text{GAIN FROM INVESTMENT} - \text{COST OF INVESTMENT}\right)}{\text{COST OF INVESTMENT}} \times 100\%$$

Also known as profit margin, ROI provides a quick gauge of an investment's profitability. It'll be easy to figure out how much profits you're making.

Do take note: the cost of investment also includes the carrying costs attached to your inventory. Let's assume that J Timewear's carrying costs for the year totals about $1000. In this case, the cost of investment would amount to $11,320.

Meanwhile, total sales come up to about $14,150. So calculating J Timewear's return on investment would be:

$$(\$14{,}150 - \$11{,}320)/\$11{,}320 \times 100\% = 25\%$$

So J Timewear would have enjoyed a 25% return on investment. Calculating your ROI is a quick and easy way to help you know how well your business is doing.

6. Carrying Costs

One of the goals of inventory management is to reduce your carrying costs as much as possible, reflecting a more efficient business. It's always good to know exactly how much you're spending on carrying costs, so here's a short recap:

CAPITAL COSTS

The opportunity cost of money invested in the inventory

INVENTORY SERVICE COSTS

Inventory-related costs like insurance and wages

STORAGE COSTS

Money spent on building and facility maintenance

INVENTORY RISKS COSTS

Shrinkage and obsolescence can happen

A general rule of thumb would be keeping the total of the above at around 25% of your inventory value.

7. Lead Time

You need to know how long it takes for you to receive your products from the moment you place a purchase order with your supplier. Knowing your lead time is crucial to planning important benchmarks for your stock level, such as the reorder point. As a retailer, you'd want to reduce your lead time as much as possible.

That means you'll need to carry less stock, which translates to lower carrying costs.

A good tip when it comes to reducing your lead times is to figure out if increasing your order frequency will help you cut your lead times. The catch is to strike a favorable balance between reducing your carrying costs (since you need less storage space) and potentially more expensive shipping.

8. Order fulfillment cycle time

How long does it take for you to get your product to a satisfied customer? The answer is your order fulfillment cycle time. Knowing this will help you judge the efficiency of your supply chain and the corresponding impact on customer satisfaction that is key to your business success.

Inventory management software can improve your business efficiency when it comes to the pick, pack, and ship process. Packing slips let you know what goes in every package and corresponding shipping labels ensures they'll reach the right destination. Plus points if you take advantage of shipping integrations to make things even easier!

9. Service Levels

The service level is the probability of not hitting a stock-out during the replenishment cycle (a.k.a. the lead time for new stock to arrive).

Hitting a stock-out is one of the greatest fears of all businesses. Just thinking about all the disappointed customers (some of whom may take to social media to voice their displeasure) is enough to scare retailers.

However, a 100% service level is impractical because of carrying costs. So the catch is to strike a balance between customer satisfaction and cost of inventory before diminishing returns set in. Most retailers target high service levels of 95% and above, as it builds customer loyalty - meaning they only have a 5% or less chance of going out of stock.

5. Go forth and grow your business

After introducing and explaining a list of key inventory management concepts ranging from fundamentals like SKUs, to expanding and measuring your business's success, it's time to start putting these concepts into play!

We hope the contents of this ebook will help you trim away your excess costs, streamline your business efficiency, and give you a higher inventory turnover rate.

In a world where eCommerce businesses offer free international delivery, if you can't beat the lowest price and the fastest delivery to market, your customers will just turn their attention elsewhere.

As customer expectations increase and profits grow leaner, you'll need to get your inventory in order, to stay ahead of the crowd. And we're here to help you. So tell us what else you'd like to know and if you have any questions, please drop us a note at content@tradegecko.com!

If you'd like to learn more about how inventory management software can help your business, feel free to connect with us at hello@tradegecko.com

Thank you for reading!

We hope you found a lot of valuable information in this eBook! Find additional information like this and more about inventory management at **TradeGecko**. This eBook is brought to you by...

The Content Creators:

VERA

Writer and potential inventory management expert, she's here to strip away the jargon to make technical things comprehensible. She loves reading fantasy novels, coffee, and adventures.

DEE

Content mastermind and editor extraordinaire, Dee takes good things and makes them awesome. She loves hot coffee, bright colors and making everyone laugh.

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Designer, illustrator and master of all things visual, Joyce takes normal words and turns them into beautiful graphics and designs. She loves smiling, ice cream and Chuck Norris.

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Resident social media hacker and all-around stellar person, when you have something you want to share, let Alicia put the word out. She loves sugar at 4pm, stylish clothes and creating things.

Find out more about the TradeGecko team at www.tradegecko.com/team

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