Inventory Management Techniques in Operations Management

Finale Inventory

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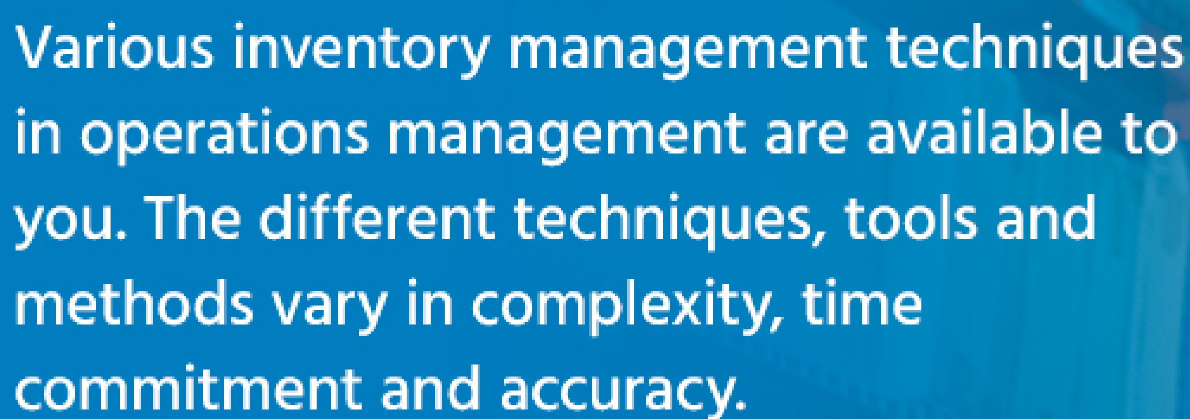


Inventory Management Techniques to Streamline Your Operations

Various inventory management techniques in operations management are available to you. The different techniques, tools and methods vary in complexity, time commitment and accuracy. Many of these strategies can help you optimize your stock levels and reordering schedules based on mathematical formulas. With so many possible approaches to improve stock management, every company that manages inventory must find the right blend of strategies and methods that work best for their particular industry, company size and unique way of doing business.

For example, third-party logistics providers (3PLs) may have more need for warehouse and inventory handling methods since they manage inventory across many locations for many clients. Meanwhile, businesses in the health and beauty market or the food and beverages industry may need to track their inventory by expiration date. Therefore, they need to prioritize strategies to move their inventory quickly. Consumer electronics brands, with their complex manufacturing and assembly procedures, require a method for tracking raw materials, works in process and finished goods.

These factors can contribute to very different methods for managing inventory — each one specialized to the particular business.

The Need to Be Strategic With Inventory Management Techniques

Inventory management is a precise discipline that relies on keeping just enough inventory to cover demand without holding so much that it unnecessarily increases costs. You must balance the risk of overstocking against the risk of understocking. Also, consider the cost of shipping items from your supplier versus the costs of holding them in your inventory. To manage inventory effectively, you need good data to forecast demand and a reliable system for prioritizing how you divide your time and resources when applying your inventory control and handling methods.

Some of the benefits of strategic inventory management include:

- **Better warehouse organization:** Good warehouse and stock handling techniques lead to a more organized warehouse. For example, by preventing overstocking, you'll have more room to dedicate to your highest priority stock. Being able to identify unprofitable and slow-moving inventory better allows you to clean out unwanted merchandise faster. Better warehouse organization contributes to better inventory management, too. When the warehouse is organized, you'll keep better track of your stock and be less likely to lose or damage products.

- **Saved time and money:** The right inventory management strategies, especially paired with tools like inventory control software, save you time and money. You'll spend less time counting physical stock, tracking down inventory discrepancies and working through preventable challenges. By optimizing stock levels, you'll save storage costs and prevent costly overstocking. You can also earn more revenue by keeping products in stock to take advantage of more sales opportunities.

- **Improved customer satisfaction:** Having stock when customers want to make a purchase is good for the customer experience. It also prevents you from having to cancel customer orders or place shoppers on waitlists. Adequate stock levels and an efficient inventory handling method also help you meet customers' expectations for faster shipping.

What Are the Inventory Management Techniques You'll Learn About?

This guide will provide an in-depth overview of the various methods of inventory control, such as:

- Setting safety stock levels and reorder points.
- Managing relationships with key vendors.
- Planning for contingencies and stock challenges.
- Auditing your stock regularly.
- Using ABC analysis to prioritize stock.
- Forecasting and planning for future demand.
- Managing inventory accounting with the average costing method.
- Reordering stock just in time.
- Managing raw materials and finished product inventory with material requirements planning.
- Calculating optimal stock quantities using the economic order quantity formula.
- Analyzing and prioritizing stock using fast, slow and nonmoving inventory analysis.

We'll explain these techniques and show you how to implement them in your own inventory management operations. Through this guide, you'll gain a wealth of resources for how to improve your inventory management system. If you're looking for a flexible, customizable software solution that can help you manage your inventory more effectively with some of these methods, contact the Finale Inventory team or get started with your free trial today.

Chapter 1:
Safety Stock, Par Levels and Reorder Points

Safety Stock, Par Levels and Reorder Points

Calculating your safety stock and par levels or reorder points are crucial inventory stocking methods. According to a study by Harvard Business Review, a staggering 72% of stockouts in retail stores result from issues with reordering and replenishment. Reordering too little or too late can have a massive consequence on business because running out of stock means you miss sales opportunities.

Whether you're involved in warehouse or store inventory control, having a precise inventory reordering procedure with the help of a calculated reorder point or par level is crucial. The other 28% of stockouts happen due to issues in the supply chain. The potential for supply chain delays makes having the right amount of safety stock especially crucial. Let's discuss the mathematical formulas for safety stock, par levels and reorder points to ensure you always have enough supply to meet your regular demand and then some.

What Is Safety Stock?

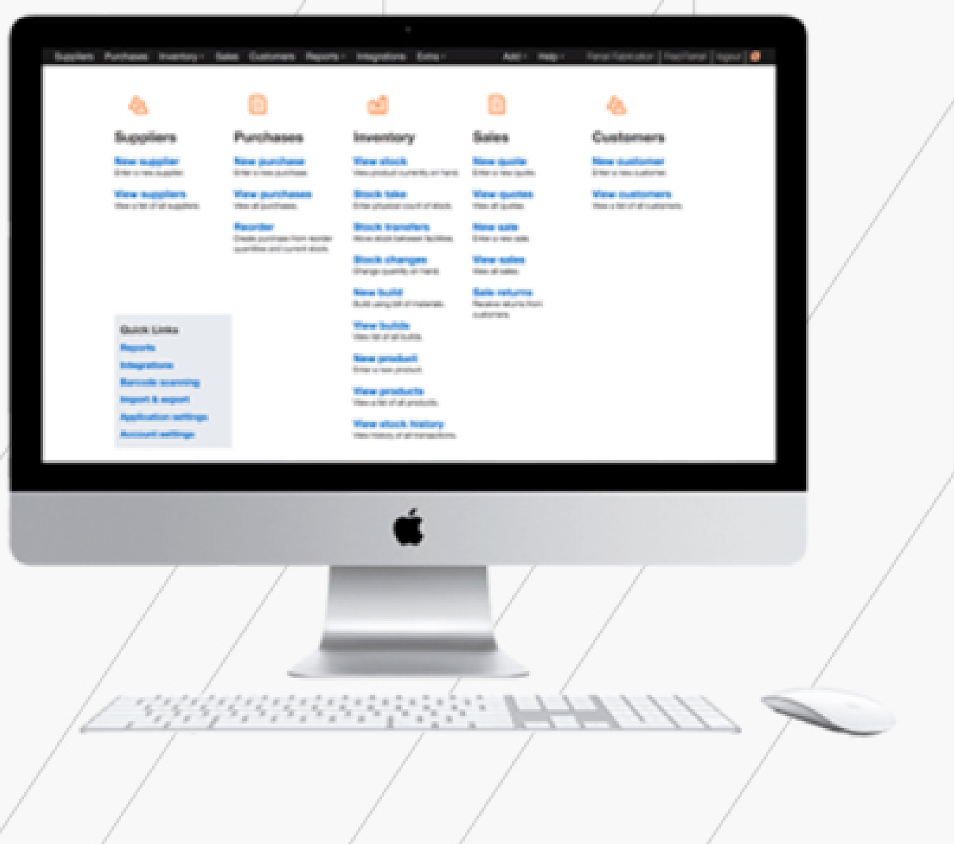
Safety stock goes by many other names, including buffer stock or "just in case" inventory. Safety stock is a special type of inventory to help a business mitigate the risk of stockouts. It is extra merchandise in addition to what you plan on selling in a given period. Businesses often express safety stock in the number of days, which can be helpful in planning for potential supplier delays.

Safety stock also helps cover your business if there's a sudden increase in demand. By tracking your sales velocity in real-time and using accurate forecasting, unexpected increases in demand place less of a burden on your inventory. This makes safety stock primarily a means to account for supplier delays. Having the right amount of safety stock is a bit of a balancing act.

What Is a Par Level?

Par level is a similar concept. It represents the minimum amount of inventory you should have on hand to meet your expected demand between replenishments. Your par level is like a soft floor before your quantity reaches zero. When your inventory levels dip below par levels, it is time to reorder.

Reordering at the par level gives you enough time to receive and process new orders from your supplier before your current stock runs out. Your par level should include the quantity you expect to sell in a given inventory cycle, plus a certain amount of safety stock. Par levels are similar to reorder points because both can trigger a procurement manager to reorder merchandise.



Many businesses find that by using the dynamic reorder point feature in Finale Inventory, they can safely keep less safety stock.

What Is a Reorder Point?

While a par level focuses just on the quantity of stock in the warehouse, a reorder point introduces some additional factors. A simple reorder point setting allows you to set minimum and maximum thresholds for your stock. A dynamic reorder point formula balances many factors. It accounts for:

- Current sales velocity, which may change with the time of year.
- Expected yearly growth.
- Supplier lead times and internal processing time.
- Number of days you hold standard inventory or the length of your inventory cycle.
- Number of days you hold safety stock.
- Quantities available for order from your supplier, such as cases of a dozen units.

Taking all these variables into account, your reorder point calculation will give you an exact date and quantity to reorder. If you order replenishment stock by your projected reorder point, your new merchandise will arrive and be processed in your warehouse just in time to replace your regular inventory.

The biggest potential hiccup is if a supplier delay brings their delivery estimates over what you've set as the supplier's typical lead time, which is where safety stock comes in. Many businesses find that by using the dynamic reorder point feature in Finale Inventory, they can safely keep less safety stock.

How Do You Set Safety Stock and Par Levels?

Determining an appropriate level of safety stock for each of your products takes some thought. You'll first want to consider how often you want your regular inventory to last and how much you typically sell per day in that time frame, along with typical supplier delays. To calculate your safety stock, use the following steps:

- Multiply your maximum daily unit sales by your maximum lead time, in days.
- Multiply your average daily unit sales by your average lead time, in days
- Subtract your average from your maximum.

The basic safety stock formula is (maximum daily sales X maximum lead time) - (average daily sales X average lead time) = safety stock quantity. You can also use a more sophisticated calculation, the safety stock formula with standard deviation, which is more accurate.

Next, you can use your safety stock quantity to determine your par level. If you restock several times a month, add your monthly inventory use to your desired safety stock level and then divide that figure by the number of deliveries per month.

How Do You Calculate Reorder Points?

To calculate your reorder point for a given product, multiply your average daily unit sales by your average lead time and add safety stock. Keep in mind that the lead time should be the length of time from when you reorder to when items become available for you to send to customers. It accounts for both supplier delivery lead time and your internal processing time. Use the following formula to calculate the reorder point:

- Reorder point = (average daily unit sales X average lead time) + safety stock

Reorder Point and Safety Stock Example

Let's put these formulas into action with a quick example.

Let's say you sell an average of 30 bottles of sunscreen every day. One time, you sold 75 in a single day. When you reorder from your supplier, it typically takes 5 days to receive and process the delivery. Recently, when demand was at its peak, a supplier delay resulted in a total lead time of 15 days. When we insert these numbers into the basic safety stock formula, we get:

- (75 X 15) - (30 X 5)
- (1,125) - (450) = 675

So, your business needs to keep 675 bottles of sunscreen on hand as buffer inventory. Next, we can use these numbers to calculate a reorder point.

- (30 X 5) + 675
- (450) + 675 = 1,125

So, when your sunscreen stock level reaches 1,125, it is time to reorder.

How Finale Inventory Leverages Reorder Points to Manage Your Safety Stock

Your reorder points and safety stock levels probably require frequent adjustments. Let's say you sell long-sleeved T-shirts. You'll probably sell more of them in the fall and winter than you might in the summer. Taking your maximum daily sales for the whole year might mean having too much safety stock in the warmer months while using your average daily sales for the whole year might leave you understocked during your busiest season and overstocked in the summer.

That's where Finale Inventory comes in. Finale Inventory tracks your sales velocity in real-time and factors your current sales trajectories into a dynamic reorder point calculation. It also factors in your expected yearly sales growth. That means your reorder point is constantly changing in anticipation of your current demand and projected growth, preventing more over-stock and out-of-stock situations.

Our software also monitors your inventory levels in real-time, making it one of the best inventory tracking methods available. Using your sales and purchasing data, Finale Inventory can update your inventory levels automatically. When any item in your warehouse or store reaches its reorder point, you'll get an alert telling you it's time to reorder and the quantities you need to order. Learn more about leveraging reorder points in Finale Inventory, and contact us to schedule a demo of all our purchasing and replenishment features.

Chapter 2: Relationship Management

Relationship Management

Improving supplier relationships is the key to better inventory control. Only 13% of businesses have a mature supplier relationship management system in place. Strategically improving supplier relationship management can generate 23%-46% more value for your company.

Strong supplier relationships often lead to better flexibility and reliability from suppliers. You'll gain leverage to negotiate down minimum quantities and pricing while improving the level of service your suppliers provide. When suppliers like working with you, they may work to bring down their lead times and go above and beyond for your business.

Let's talk about some tips for how to control inventory management with better supplier relationship management.

1. Evaluate Suppliers Before Partnering With Them

Before entering into a contract or business partnership with a supplier, check that they are a good fit for your business. Assess the risks and opportunities, and feel out whether the company and its personnel mesh culturally with you and your organization. Ask for references from other clients, and ask them and the supplier questions such as:

- How does the vendor handle emergencies?
- Is the company financially stable?
- Can the supplier consistently fill orders on time?
- What do their pricing and typical lead times look like?

Working with reliable suppliers that can meet your business needs can greatly improve your inventory control.

2. Communicate Clearly and Proactively

Being transparent with your suppliers is key to long-term partnerships. The more your supplier knows about your upcoming needs and expectations, the better prepared they will be. Here are some tips for effectively communicating with your suppliers:

- Keep your suppliers in the loop about your plans and strategies.
- Tell them when you predict increases or falls in demand, so they can prepare with appropriate inventory quantities.
- Keep communications short and to the point to keep your vendors updated while respecting their busy schedules.
- Foster a healthy, friendly relationship by thanking and praising suppliers for a job well done.
- Provide constructive feedback, and be honest about issues upfront.

3. Honor Your Contracts and Verbal Agreements

Start by creating a solid vendor contract that clearly defines all parties' responsibilities. Negotiate a mutually beneficial agreement, and feel free to challenge clauses. Be open about your needs and expectations and listen to the supplier's needs and expectations, too.

Once the contract is in place, honor your commitments. As the relationship progresses, act in good faith by following through on verbal agreements even when they aren't in writing. Demonstrating your reliability improves trust with your business partners.

4. Pay Suppliers on Time

Managing cash flow is a delicate balancing act that's just as critical for your suppliers as it is for you. Pay on time and in full for inventory that arrives on time and in full. When suppliers know they can trust you to pay by the due date, they're more likely to treat you as a priority customer. They'll be motivated to deliver orders on time.

5. Connect Suppliers With Your Inventory Management Solution

An excellent way to improve your supplier relationships is to integrate them with your inventory management software. It provides them with access to your real-time inventory data, helping them prepare for when your stock levels get low. It also speeds up the reordering process since you can auto-populate purchase orders using data from the latest supplier catalogs.

Finale Inventory offers powerful integration with SPS Commerce, an electronic data interchange solution that connects you with your suppliers. Our solution lets you send inventory advice, invoices and shipping notices directly to your suppliers. We also make it easy to store important information about your suppliers, so you can always maintain good communication.

Check out Finale Inventory for yourself with a free 14-day trial, or book a software demo to see how we can keep you connected with your strategic suppliers.

Chapter 3:
Contingency Planning

Contingency Planning

Having a plan B for your worst-case scenario makes it easier for you to react quickly to problems as they arise. With a well-formed contingency plan in place, your business can quickly resolve inventory challenges such as overstocking, understocking, overselling and lack of warehouse space.

Potential Issues in Inventory Management

In the world of e-commerce and modern inventory management, things move fast and obstacles can arise at a moment's notice. In 2018, 13.2% of supply chain leaders said inventory management was their greatest challenge, and 19.7% cited fluctuating consumer demand. Coordinating across multiple sales channels is the biggest challenge for another 11.8% of supply chain executives.

Planning for these issues and more is critical. Safety stock is even sometimes called contingency stock since it is one of the most important inventory management strategies for preventing understocking. Some of the hurdles and challenges in your inventory management might include:

- Your sales unexpectedly spike, and you run out of stock.
- When selling on multiple sales channels, you accidentally oversell by promising the same merchandise to multiple customers.
- You miscount or miscalculate your inventory and end up with more or less stock than you need.
- You have slow- and non-moving inventory taking up valuable storage space.
- Your manufacturer runs out of inventory, or another issue significantly delays a replenishment order.
- Your manufacturer discontinues your product.
- You run out of warehouse space or need additional space during your peak sales season that would go unused during the rest of the year.

If you're an inventory manager for your business, consider the likelihood of these scenarios and what you can do when they occur. Developing smarter inventory handling methods and management techniques can help you plan for and sometimes even prevent these concerns.

Three Steps to Contingency Planning in Inventory Management

Contingency planning, often called business continuity planning, is the process of developing and stress-testing an action plan for emergencies and problem scenarios that may affect your company. Contingency planning can cover emergencies and worst-case scenarios that affect every aspect of your business, such as power outages, floods or workplace violence.

In inventory management, these plans help you quickly recover from issues such as supply or warehouse space shortages. Inventory contingency planning requires three steps — assess, plan and communicate.

Step 1: Assess

First, consider what is most likely to happen in your warehouse. Is a crucial supplier located in a region with frequent natural disasters? Are any raw materials used in your products subject to supply shortages? Is it difficult to predict demand?

An excellent first step is to map out your company's essential processes, especially those related to or relying on inventory management. Then consider some worst-case scenarios, how they would affect your business and their likelihood of occurring.

Step 2: Plan

Next, develop a plan for each of the scenarios that might occur. Your plan should:

- Identify triggers that put the plan into action.
- Assign roles and responsibilities, and explain how employees will be affected.
- Outline a timeline for mitigating the problem.
- Specify technology that will assist you in resolving or preventing inventory concerns.
- Provide a list of alternative vendors to help you stay in stock during a supplier delay.
- List options for temporary warehousing space to alleviate space constraints.
- Consider options for unloading excess product in secondary markets to mitigate overstocks.

During this phase, you might also identify some solutions for improving inventory control that can reduce the risk or severity of a problem. For example, using real-time inventory tracking software can prevent issues such as miscounting inventory or running out of stock while helping you better predict demand.

Step 3: Communicate

Once your plan is in place, make it clear to everyone involved. Your team should know when and why a particular plan would be called into action and what their responsibilities will be. Consider who needs what information, including your warehouse's leadership, your receiving and loading dock crew and your inventory control team.

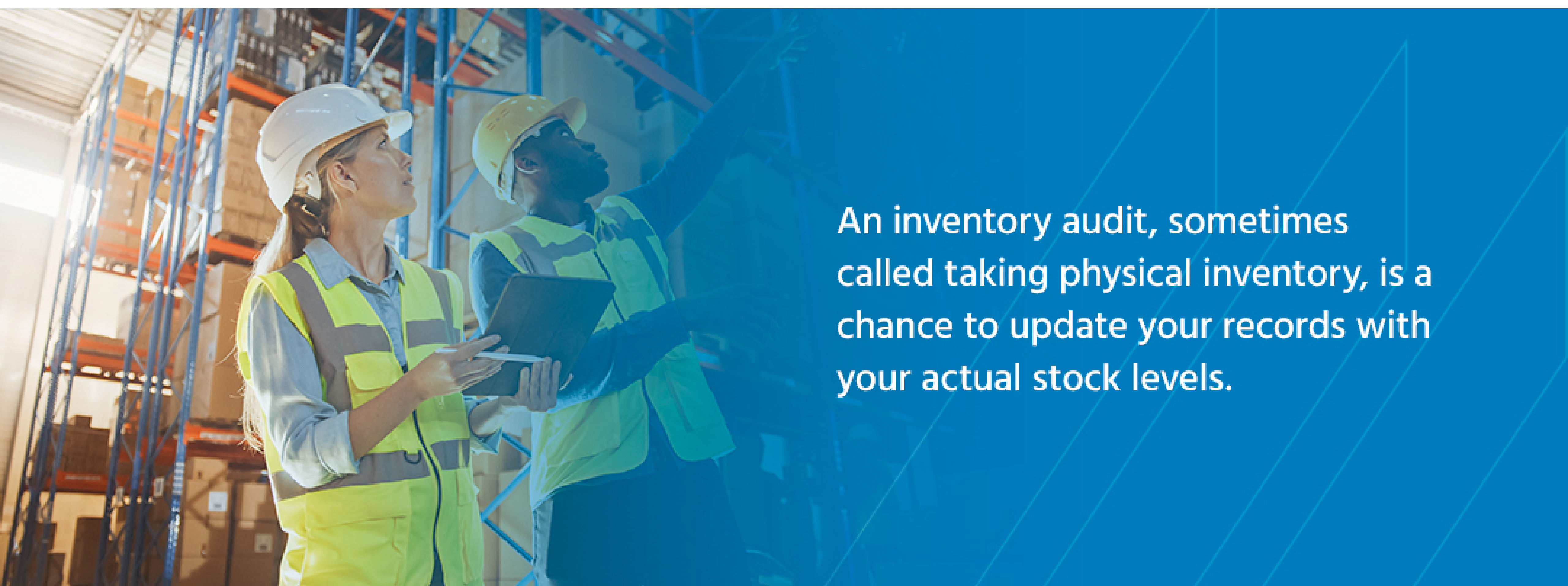
How Finale Inventory Helps You Plan Ahead

Finale Inventory is robust software with many tools to help you predict and prevent inventory challenges. It includes a powerful analytics dashboard so you can analyze your sales velocity, making upward and downward trends in demand more visible. With reorder forecasting and low stock alerts, you can replenish your stock before you run out. For more information about how to improve inventory control with Finale Inventory and how to tackle your greatest inventory challenges, contact us for a live demo.

Chapter 4:
Regular Auditing

Regular Auditing

In retail and warehouse settings, inventory accuracy is often relatively low. Improving inventory accuracy can help increase sales. Because keeping accurate inventory records is so challenging and critical to success, frequent inventory audits are essential.



What Is an Inventory Audit and Why Is it Important?

An inventory audit is a way to check that your inventory records line up with what is physically in the warehouse or stockroom. Sometimes, your records can misalign because of a typo or human error in logging inventory. Your inventory can also experience shrinkage through:

- **Theft:** This is common in consumer electronics.
- **Expiration:** This is common in the food and beverage industry.
- **Product damage:** This can happen with almost any type of inventory.

Inventory accuracy typically decreases after a physical count. An inventory audit, sometimes called taking physical inventory, is a chance to update your records with your actual stock levels. It also lets you follow up on discrepancies and may even help you track down missing inventory. Regularly auditing your stock can also give you ideas for inventory management that can improve your business efficiency.

How Do You Run an Inventory Audit?

A warehouse inventory audit can involve many procedures, depending on the goals of the audit. They might include:

- **Conducting physical inventory and cycle counting:** Running an inventory audit can involve counting physical inventory and cycle counting with a scanner.

- **Spot checking:** Spot check throughout the year if you find that you tend to run into issues when you perform a full physical inventory at year-end. Spot checking means selecting a product, counting it and comparing the number to what it should be. Focus on spot checking fast-moving or problematic products.

- **Verifying inventory in transit:** When transferring stock between locations, you should be able to verify that the inventory is in transit.

- **Analyzing inventory costs:** During an audit, you can analyze your inventory costs, including order costs, shortage costs and holding costs.

- **Investigating missing stock:** Can't account for every item delivered in a shipment? Despite your best efforts, items can still go missing or get stolen. An inventory audit can help you identify missing stock and the cause of the problem.

- **Examining inventory for damage and sellability:** An audit can help you identify inefficiencies, such as damage or lack of sellability.

- **Matching invoicing records to shipping documentation:** During an audit, you can verify that invoices for your products match the number of items and costs of the items shipped from your warehouse.

Using Finale Inventory for Inventory Auditing

Finale Inventory has many features that make stock auditing easier. First, our integrated barcoding solution speeds up physical inventory counts. Your warehouse workers can scan inventory with a barcode reader and check the real counts against the software's expected counts as they go. Our barcode software has a stock take and cycle counting setting that logs audited stock quantities in your software right from the app.

We also have an inventory audit feature that lets you see a history of stock changes and the employees responsible. When you notice any concerns, you can track down the last employee to log a stock change in the system and verify records. Having the ability to track inventory in real time lessens your dependency on physical inventory counting. Because the system uses your sales and purchasing records to update your stock records, you do not have to physically count your inventory to determine your current stock levels.

You can rely on your software to keep your inventory data accurate and up to date and combine it with an occasional audit to account for shrinkage. Sign up for a free trial of Finale Inventory or schedule a demo with a product expert today.

Chapter 5:
Prioritizing With ABC Inventory Analysis

Prioritizing With ABC Inventory Analysis

One of the best modern inventory management techniques is using ABC analysis to classify and prioritize your inventory. By focusing your attention on your most important stock first, your business can plan for success. You can use ABC analysis to determine how you allocate inventory staff and resources, organize your warehouse and order inventory.

What Is ABC Analysis and the 80/20 Inventory Rule?

The Pareto Principle is the theory that 80% of your results come from 20% of your efforts. It has many applications, including in inventory management through ABC analysis. Applying the 80/20 rule to inventory, 20% of your stock accounts for 80% of your profits.

Dedicating most of your attention and inventory management methods to the top-performing 20% of your stock, or your Class A inventory, can have many business benefits. Using ABC Analysis, inventory is grouped into three categories:

Class A Inventory

Accounting for 10%-20% of your total stock, Class A inventory is your highest-value inventory and often sells relatively quickly. While it's a small portion of your total stock, these products make up 80% of your revenue. Class A inventory deserves the highest level of inventory accuracy and tighter controls. It's also usually kept closest to the receiving and loading dock, shortening the time it takes to store and pull these items.

Class B Inventory

Class B inventory usually represents 30% of your total stock and is reserved for medium-value items. Your Class B inventory might also include fast-moving, low-value items and slow-moving, high-value items. All together, these items might account for anywhere from 15%-20% of your revenue.

This inventory will be your second-highest priority. As such, the inventory records will be relatively accurate and have medium controls. They'll be kept in the B section of your warehouse or storeroom, which is the second furthest from the receiving and loading dock.

Class C Inventory

Making up 50% of all items you have in stock, Class C products contribute just 5% of your revenue. Taken individually, each C product is relatively low priority and low value. They might also be slow-moving or even non-moving items.

However, as a group, that last 5% of your revenue is still quite valuable. Because they're the lowest priority for your inventory operations, they're afforded more leniency in record accuracy and inventory control methods. They're also stored in the back of the warehouse since they're usually picked and restocked least often. Alternatively, you might not store them in your warehouse at all and only order them from your suppliers when customers place orders with you.

How Finale Inventory Can Help

Finale Inventory's detailed analytics dashboard offers a wealth of insights about your individual products. You can analyze your profit margins, sales velocity, available quantities and gross sales revenue per product, helping you classify A, B and C products.

With our flexible product labeling system, you can even categorize your inventory by location or classification. By grouping products together in the system, you can analyze the profitability of your A, B and C inventory classes. To learn more about how Finale Inventory can help you track the profitability of your inventory, register for your free trial or sign up for a demo today.

Chapter 6:
Accurate Forecasting

Accurate Forecasting

While it's impossible to predict the future, you can get very close with reliable forecasting methods. A 2020 survey revealed that 40% of retailers plan on managing their demand-supply using real-time data, and 45% said the same with inventory replenishment. Another survey revealed that demand forecasting is one of the top three most popular investments among retail and consumer goods supply chain leaders.

What Is Inventory Forecasting?

Inventory forecasting or demand planning uses historical data and ongoing trends to predict your inventory needs. You might also incorporate known events such as upcoming holidays or sales to predict demand. Sometimes demand forecasting requires extrapolation or additional data sources, especially if managing inventory for short life cycle products that do not have any sales history. Accurate inventory forecasting also factors in timing, availability and delivery speed to determine when and how much to reorder to meet expected demand.

In general, the more data sources you can account for, the more accurate your forecasts will be. Some things to look at in your forecasting include:

- Overall market and industry trends.
- Last year's seasonal, monthly and weekly sales performance.
- Economic conditions.
- Your current and expected yearly growth rate.
- Subscriptions, presales and contracted jobs that indicate inventory you know will be needed.
- Your upcoming promotions and planned marketing spend.

1. Keep Less Inventory on Hand
2. Reduce Stockouts
3. Reduce Overstocks
4. Schedule Warehouse or Production Operations Efficiently

What Are the Benefits of Inventory Forecasting?

Inventory and sales forecasting offer many advantages, including the following:

1. Keep Less Inventory on Hand

When you have accurate predictions guiding your reordering decisions, you can keep less safety stock. You also know which items to stock up on and which are declining in popularity. You won't dedicate warehouse space to items that aren't going to be in high demand. Even for your fast-moving items, you can reorder less stock more frequently because you have a predictable schedule for reordering and supplier lead times.

2. Reduce Stockouts

By predicting increased demand before it depletes your current stock, your business can reduce stockouts. Being out of stock can be costly because it means you lose sales opportunities. You may even lose customers who decide to shop from a competitor. Reducing stockouts also lets you minimize backorders and get your shipments to customers faster without delay.

3. Reduce Overstocks

You can also predict when demand will fall, letting you know you should reorder fewer products or less often. Overstocks can be just as costly because they take up valuable warehouse real estate that could go to in-demand items. Businesses often sell overstocked goods at a lower value, which creates more costs for the companies.

4. Schedule Warehouse or Production Operations Efficiently

When you know which products are moving quickly and which need to be cleared out to make room, you can schedule your operations more efficiently. You might schedule an inventory audit when you know demand will be low or cancel one when you expect demand to spike.

You'll know when your picking team will be busier and when new orders are arriving, allowing you to schedule staff for your receiving department. If you're involved in assembly or light manufacturing, which is often the case for electronics companies, you can schedule raw materials deliveries and production staff based on future demand.

How Can You Forecast Inventory Accurately?

Precise forecasting starts with accurate inventory tracking methods. You must know your precise stock levels to predict your future inventory needs and plan purchases faithfully. It's also essential to have accurate and complete sales history data that incorporates all your sales channels.

Experts recommend using more than two years' worth of historical sales and not trying to predict too far into the future. The longer the time horizon, the less accuracy you can achieve. All the sources of data you plan to use should be validated to ensure the most reliable predictions. Then you can incorporate various inventory forecasting methods, such as:

Trend Forecasting

Trend forecasting looks at trajectories in sales to predict when and how they will rise and fall. Take a given period and calculate the sales velocity of the product. If you find an upward trend, you can expect sales to continue to rise at a steady pace.

Likewise, with a downward trend, you can expect the same. It's wise to incorporate projections with some other forecasts. For example, if you notice a spike in sales because of a recent promotion, you might expect sales to start to level out and decrease after the sale ends.

Graphical Forecasting

Graphical forecasting builds on trend forecasting to create a visual representation of the expected trends. You can also use a linear graph to examine historical and yearly sales and look for the peaks and valleys to predict when similar events will occur this year.

Qualitative Forecasting

When predicting inventory demand for short life cycle products and other stock where historical data is not useful or relevant, it helps to incorporate qualitative data. This is a common inventory forecasting technique for new ventures and companies introducing never-before-seen products. You'll go directly to customers to evaluate potential demand. This method works best when you can incorporate market research and focus group data to flesh out your mathematical models.

The Dynamic Reorder Point Formula

Inventory control software like Finale Inventory gives you the option to automate your sales forecasting. Finale Inventory tracks your sales velocity in real time and incorporates this data into your reorder point forecasts. When you input data about your lead times and expected growth, Finale Inventory calculates how much and when to reorder based on your real-time demand trends.

If you want to use your own forecasting calculations, you can view your sales velocity on a per-product basis at any time in the analytics dashboard. To see how Finale Inventory can help you analyze your inventory data to make sound decisions, request a live demo today.

Chapter 7:
Average Cost Inventory Accounting

Average Cost Inventory Accounting

One of the most important aspects of inventory management is accounting. For most e-commerce sellers and physical retailers, inventory represents the company's biggest asset. Thus, tracking your inventory purchasing costs accurately is crucial for monitoring financial health and reporting your financials for tax purposes. Average costing is the best accounting method to help your busy business stay organized and on track.

What Is the Average Costing Method?

The average costing method is an inventory accounting technique where you calculate the cost of goods sold (COGS) based on an average of your inventory purchases. It's an alternative to the First In, First Out (FIFO) accounting method and the Last In, First Out (LIFO) accounting method.

Also called the weighted average method, this method calculates a simple average rather than assigning costs based on the most recent or oldest prices paid. Average costing is often used in the food and beverage industry since it deals in large quantities of fast-moving, identical products.

The FIFO method assumes that the oldest items in stock are the first you choose when you ship or sell products to customers. It prevents inventory from deteriorating or expiring while in your warehouse.

Why Is Average Costing Method Useful?

You've probably heard why the FIFO method is better for inventory management when it comes to inventory handling and distribution. The FIFO method assumes that the oldest items in stock are the first you choose when you ship or sell products to customers. It prevents inventory from deteriorating or expiring while in your warehouse.

When it comes to accounting, the FIFO method requires some additional complexity. You must input different COGS for different products based on when you sell them. The average costing accounting method offers some unique advantages and can even improve your operational efficiency. With average cost inventory accounting, you can gain benefits such as:

- **Ease of use:** Take the average of all your recent inventory purchases and assign the same COGS to all products sold. When you make a new purchase, you recalculate the weighted average. The method is simple and can even be automated using inventory management software with accounting capabilities.

- **Saved time in operations:** Average costing speeds up picking operations because workers do not have to record the date the item was purchased.

- **Better product pricing:** Average costing smooths pricing fluctuations and accounts for rises and falls in your purchasing costs. You can price your products with less risk of underpricing amidst rising costs.

- **Tax compliance:** The average costing method is a generally accepted accounting method that complies with International Financial Reporting Standards (IFRS). LIFO can underrepresent your tax liability, while average costing is a compliant way of reporting your financial data.

Streamline Your Inventory Accounting With Finale Inventory

Among all the inventory tools and techniques available, it's critical to look for a solution with accounting abilities. Finale Inventory offers an array of accounting and financial reporting features to keep you organized and complaint.

Our software incorporates your purchase order data to calculate your COGS using average costing using the most up-to-date purchasing information. We also have a useful feature for calculating landed costs for different items that arrive in the same shipping container. Finale Inventory also integrates seamlessly with QuickBooks Desktop and QuickBooks Online to give your accounting team the data they need.
To learn more about our inventory accounting tools, book a free demo or sign up for a 14-day trial today.

Chapter 8:
The Just-in-Time (JIT) Method

The Just-in-Time (JIT) Method

The just-in-time (JIT) inventory strategy is one of the most famous modern inventory management techniques. It's a production management philosophy developed and popularized by Toyota focused on eliminating waste, inconsistencies and unnecessary requirements. While developed as a production method, it has broad applications for manufacturing plants, warehouses and any company involved in inventory management.

What Is the Just-in-Time Method for Inventory Management?

The JIT method is one of the most popular inventory management techniques in the supply chain sector. It's based on the principle that inventory is inherently costly, taking up time, money and space, and that it should only arrive just in time to meet customer demands. A common goal of inventory management is to have items in the right place at the right time in the right quantity — in other words, just in time, no sooner nor later.

Using the JIT approach, a business lowers the volume and quantity of inventory on hand. It usually involves ordering small amounts of inventory they know they can move quickly and then reordering from suppliers regularly. This can have immense cost savings because they do not invest in unnecessary inventory or spend more resources managing items in store.

This method is also called a pull inventory system because manufacturers and distributors wait for customer demand to "pull" inventory through the supply chain. They make new purchases just days before they're needed for resale or distribution, meaning inventory spends very little time in storage. It comes with the inherent risk of stockouts or delays because a supplier lead time delay can result in inventory arriving late.

Another risk, particularly among manufacturers who use JIT, is that defects cut into the supply. Since manufacturers only order raw materials for jobs as needed, they may not have the excess stock to account for assembly errors. While JIT offers many benefits, increased risk in the supply chain has made some supply chain leaders rethink the strategy.

Advantages of JIT Inventory Management

The primary benefits of JIT inventory management are cost and space savings. Cost savings from JIT inventory management include:

- Preventing over-production and overstocking.
- Reducing investments tied up in non-liquid stock and improving cash flow.
- Reducing staffing needs for inventory management, which lowers wage and salary expenses.
- Lowering warehouse costs by owning or renting a smaller storage facility.
- Reducing the risk of inventory becoming damaged, obsolete or stolen while in storage.

Space savings provide other advantages. With a smaller warehouse, you'll save time managing inventory. You'll also reduce movement waste among warehouse staff who do not have to travel long distances to collect, count or move inventory. Saving space and movement can also improve worker satisfaction and reduce the chances of muscle strains and other injuries.

How Finale Inventory Helps You Manage JIT Inventory

Finale Inventory is a time-saving inventory management tool that can help you move inventory through your supply chain just in time. With advanced demand forecasting capabilities, you can use the JIT approach along with a small amount of safety stock. This lets you ensure deliveries arrive just in time while also minimizing the risk of stockouts. By integrating Finale Inventory with your sales channels, you'll gain a centralized database of all current sales obligations. This lets you schedule production or supply deliveries based on the sales you've already made.

Our solution also supports integration with a shipping manager to allow you to schedule customer shipments based on your available stock. This feature lets you manage drop shipping, so you can order inventory and have it delivered directly to customers. Contact our team to schedule a one-on-one demo to learn how we can support your JIT inventory system.

Chapter 9: Backordering

Backordering

Another one of the essential inventory management techniques in operations management is backordering.

What Is Backordering?

Backordering occurs when your company decides to accept orders and receive payments for products that are out of stock. Essentially, this means you order a product only after a customer places an order for it.

Though backordering can be financially beneficial, if you're unprepared, it can be an enormous logistical challenge. When one item is backordered, you can simply create a new purchase order and let the customer know when they can expect the item to arrive. However, when several items are backordered, the issues can quickly start to grow.

Pros and Cons of Backordering

There are several pros and cons to consider if you want to allow customers to backorder items with your company.

Pros

The advantages of backordering include:

- **Increased sales:** Letting customers backorder can keep them from going to your competitors, which means fewer lost sales.
- **Improved cash flow:** Backordering can mean you get paid before you spend money ordering products.
- **Saved storage space:** When you order a product only after a customer orders it, you ship it out as soon as it arrives, saving you storage space.
- **Lowered risk of overstock:** Waiting until a customer orders a product to order it yourself means you'll never have to worry about having more products than you can sell.

Cons

However, there are some disadvantages of backordering to consider before you move forward, including:

- **Longer wait times for fulfillment:** Because a customer has to wait for you to receive a product from your supplier before you can send it to them, they'll wait longer to receive their item.

- **Risk of customer dissatisfaction:** Discovering an item is out of stock or has a long wait time can increase customer dissatisfaction with your company.

Weigh these pros and cons to determine whether backordering is a good idea for your company.

What Companies Should Use Backordering?

For many businesses, backordering can increase sales, which is why so many are willing to backorder items. Small retailers, in particular, may need to avoid the risk of overstocking. However, even larger businesses can take steps to mitigate the risks of backordering.

For example, your company can label an item with a preorder option rather than "buy now." You could also use the "no-stock" approach, which means you take only backorders until you generate enough sales to place a bulk order with your supplier. These steps can create a reasonable expectation among your customers that items will take more time to arrive.

If you sell larger or more valuable items, customers tend to have more tolerance for long delivery times. In these cases, backordering may be a viable option for your company.

How Finale Inventory Can Help

At Finale Inventory, our software lets you track inventory from raw materials to works in process and finished goods. Combined with sales velocity tracking to aid in demand planning, Finale Inventory is a complete solution for operations management. To learn more, ask about a personalized demo or start your free trial today.

Chapter 10:
The Economic Order Quantity (EOQ) Method

The Economic Order Quantity (EOQ) Method

When determining a reordering schedule, you can often save warehousing space by reordering more often in smaller quantities. However, reordering more often leads to higher logistics costs while saving on storage costs. Increasing storage costs will likewise lower logistics costs.

The economic order quantity (EOQ) formula helps you balance these two costs to find the most cost-effective way to reorder stock. It also accounts for the quantities needed to maintain adequate stock levels to help your business take advantage of the most sales opportunities.

What Is the EOQ Model?

Economic order quantity is the optimal amount of inventory to have on hand at any given time. It's distinct from the reorder point formula, which determines when to reorder. The EOQ formula determines how much stock you should keep on hand to run your business most efficiently with better inventory ordering methods.

The EOQ helps you determine the optimal quantities to reorder to help you reduce shipping and warehousing costs while minimizing stockouts and overstocks. It's an especially helpful tool for third-party logistics (3PL) providers that manage logistics, warehousing and shipping for their clients. Using the EOQ formula, you can quickly determine the reordering schedule and quantities that will save your business the most money.

How Economic Order Quantity Is Calculated: The EOQ Formula

To calculate your EOQ, you'll first need to know three variables:

- **Holding costs:** This is how much it costs to store and manage inventory in your warehouse. Calculate holding costs using this formula: (Storage costs + employee wages + opportunity costs + depreciation costs) / total value of your annual inventory = inventory holding cost

- **Annual demand:** This is how much product you expect to sell in a year.

- **Order costs:** This is the fixed setup cost associated with placing an order with a supplier, shipping and handling fees and anything other than the inventory itself that your supplier invoices you for.

To calculate your EOQ, take the square root of 2 multiplied by your order costs multiplied by your annual demand, divided by your holding costs.

Finale Inventory Tracks Your Demand and Landed Costs

Finale Inventory's robust analytics reporting suite offers detailed insights into your inventory catalog. You can track your landed costs and cost of goods sold (COGS) by individual product and analyze your sales velocity and sales history to predict your annual demand.

Once you've calculated your EOQ, you can execute your orders using our purchasing and replenishment module and use your ideal reordering quantities to inform your dynamic reorder point forecasting. To see for yourself how Finale Inventory can help you optimize your replenishment cycle, try the software free for 14 days.

Chapter 11:
The Fast, Slow and Non-Moving (FSN) Method

The Fast, Slow and Non-Moving (FSN) Method

Fast, slow and nonmoving (FSN) inventory analysis is often used with ABC analysis to help inventory managers prioritize their inventory control techniques and resources. Fast-moving inventory may require more attention than slow-moving inventory, just as high-value products may require more attention than low-value stock.

By first prioritizing how you will dedicate your attention and resources, you can improve inventory management. Analyzing your inventory for speed of consumption in addition to value can help you set up inventory handling methods that work best for your product portfolio.

What Is the Fast, Slow and Nonmoving Method of Stock Control?

Similar to ABC analysis, the FSN inventory management techniques classify stock into three categories:

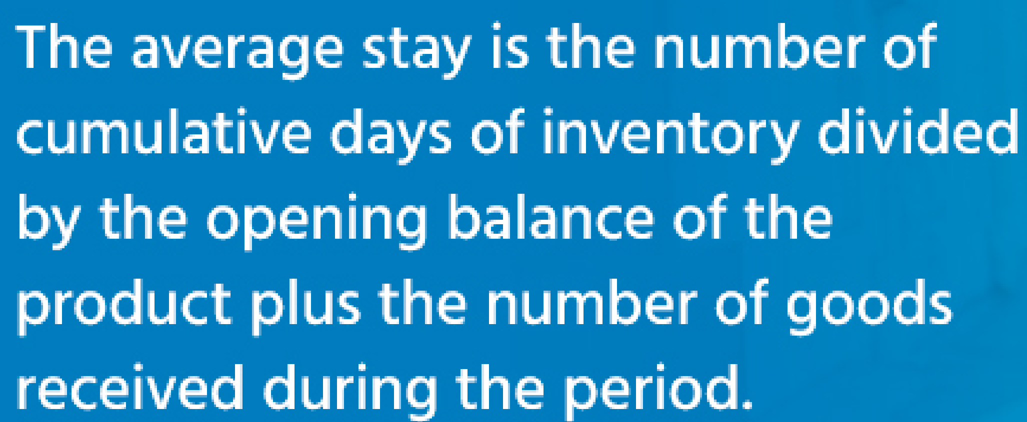
- **Fast-moving:** These goods sell quickly and typically have a lower profit margin. It's generally best to keep a larger volume in stock and a larger quantity of safety stock. These items also need more stock control and better monitoring. In general, your fast-moving category should make up about 20% of your inventory.

- **Slow-moving:** These items are still selling, just not as quickly. They typically have a very low turnover rate and can be problematic if not addressed. Slow-moving stock typically accounts for 35% of your total inventory.

- **Nonmoving:** The nonmoving category represents your deadstock — items with little-to-no demand that are unlikely to sell. Inventory managers might store nonmoving items in the back of the warehouse if they expect the item to come back into demand with a changing season. If nonmoving inventory sells at all, you typically do not want to replenish it. However, most nonmoving inventory should be unloaded. Often the best strategy is to donate it, allowing you to get rid of the product and earn a tax benefit.

Benefits of FSN analysis include creating a storage system based on FSN analysis that can help you eliminate movement waste and save time within the warehouse. By keeping your fastest moving products closest to the receiving and loading dock, your workers can access them more easily.

Another useful application of this strategy is product kitting or bundling, which is popular with health and beauty, electronics and food and beverage companies. A company might create a bundle that pairs a fast-moving product with a slow-moving product to help move the slower products faster and clear up inventory space.



How Do You Determine Fast, Slow and Nonmoving Inventory?

Analyzing your fast, slow and nonmoving inventory requires a few simple formulas and steps, including:

- **Determine the average stay and consumption rate:** The average stay is the number of cumulative days of inventory divided by the opening balance of the product plus the number of goods received during the period. This equation will result in a number representing the average number of days the product stays in storage. The consumption rate is the total number of products distributed divided by the total number of days in the inventory period.

- **Calculate the cumulative consumption rate and cumulative average stay:** The cumulative average stay is the average stay of a particular item plus the average stay of all items with a longer average stay. The cumulative consumption rate is the consumption rate of a product plus the consumption rate of all items that move faster than that product.

- **Turn these figures into a percentage:** The percentage average stay is calculated by taking the cumulative average stay of one item divided by the cumulative average stays of all items and multiplying by 100. The percentage consumption rate is calculated by taking the cumulative consumption rate of one product and dividing that by the cumulative consumption rate of all items, then multiplying it by 100.

- **Categorize products based on percentage:** Fast-moving products include any product with a score of 10% or less on the average cumulative stay and 70% of the average consumption rate. Slow-moving products include any product with a score of 20% or below on the average cumulative stay and 20% of the average consumption rate. Nonmoving products include any product with a score of 70% or less on the average cumulative stay and 10% or less of the average consumption rate.

Track Sales Velocity With Finale Inventory

Finale Inventory makes it easy to identify your fastest-moving inventory and your slowest and nonmoving inventory alike. In our analytics dashboard, you can examine the sales velocity per product and see which items move quickly, slowly or not at all.

You can also contact us for help generating a custom report that automatically classifies your inventory by sales velocity. This makes analyzing your inventory using the FSN method a breeze! Contact Finale Inventory for a demo or set up your free trial today.

Finale Inventory is a highly customizable inventory management solution that can allow your business to manage its inventory more effectively.

What Finale Inventory Can Do for You

Finale Inventory is a highly customizable inventory management solution that can allow your business to manage its inventory more effectively. Our robust features have many applications across many businesses and industries, helping you adopt the tools and techniques of inventory control that work best for your unique business model. Our solution includes features such as:

- **Real-time inventory tracking:** Use your sales, purchase order documents, invoices and shipping records to update stock quantities in real time.

- **Barcode inventory management:** Using our barcoding module and mobile scanners, you can speed up warehouse operations and inventory handling techniques such as receiving, picking, packing, fulfillment and inventory auditing.

- **Multi-warehouse support:** Track inventory by location across multiple buildings or multiple locations within a single warehouse.

- **Purchasing and replenishment:** Leverage reorder points to monitor stock levels and replenish inventory on time in the correct amounts. Generate purchase orders and send them directly to vendors right in the software.

- **Order management:** Manage customer orders across all your sales channels and ensure they ship out on time.

- **Software integrations:** Integrate Finale Inventory with your marketplaces, shopping cart platform, accounting software and shipping manager. This keeps your inventory records up to date for all aspects of your business.

- **Inventory accounting:** Calculate landed costs and access many financial reports to help you manage your business, report taxes and maintain regulatory compliance.

- **Serial and lot number tracking:** Track serial numbers for electronics and automotive parts and lot numbers for food, beverage, health and beauty products.

E-Commerce Inventory Made Easy

Finale Inventory empowers companies to take their business digital and begin selling online. We offer various tools to simplify e-commerce inventory management. The core of our solution is the ability to easily manage inventory in a centralized platform for all your online sales channels. You can track sales and update your inventory levels across marketplaces such as Amazon or eBay alongside your own e-commerce store via a shopping cart platform integration. With this tool, you can update inventory levels across the web in real time, preventing you from overselling and helping you take advantage of all sales opportunities.

We also offer a product kitting and bundling feature that helps you track inventory for the individual products included in a bundle. When a customer orders a kit online, Finale Inventory will decrement stock levels for every item included in the bundle, so you can continue selling items individually and as a set using one centralized set of stock.

To learn how Finale Inventory can make your e-commerce business more efficient, set up a product demo or try it for yourself today.

THANK YOU PAGE

Thank you for downloading our guide to Inventory Management Techniques in Operations Management. No matter what products you sell or what industry you're in, having an efficient, reliable inventory management system is key to your long-term success. With the techniques, methods, and tools in this guide, you can set up a system to optimize your stock quantities, identify and prioritize your most valuable stock, and set ideal reorder points.

Some of the inventory control methods you'll learn about in this guide include:

- Safety stock, par levels and reorder points.
- Supplier relationship management.
- Inventory contingency planning.
- Stock auditing and cycle counting.
- ABC inventory analysis.
- Inventory forecasting and accounting.
- Just-in-time and economic order quantity methods.
- Material requirements planning.
- Fast, slow and nonmoving inventory analysis.

If you want to learn how to apply these techniques using inventory management software, get in touch with Finale Inventory today. Set up a live demo and ask about the features you're most interested in.

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