7 STEPS

TO SUCCESSFUL INVENTORY BUYING

The Buying Process

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Overview

Inventory is the single largest asset and investment for a wholesale distributor. The success and failure of a company may ultimately depend on how their inventory is managed. In turn, there are many different facets of managing this investment. One important area that can often be neglected is the Buying Process.

The Buying Process is a method by which the distributor's buyers evaluate customer demand and thus purchase the appropriate level of inventory. This straight forward description, however, does not begin to indicate how complex the Buying Process can be. The resources, time, and expertise required to excel at buying are not as intuitive as one might think. It can be so difficult that the Buying Process can seem like an insurmountable task with which a business must deal.

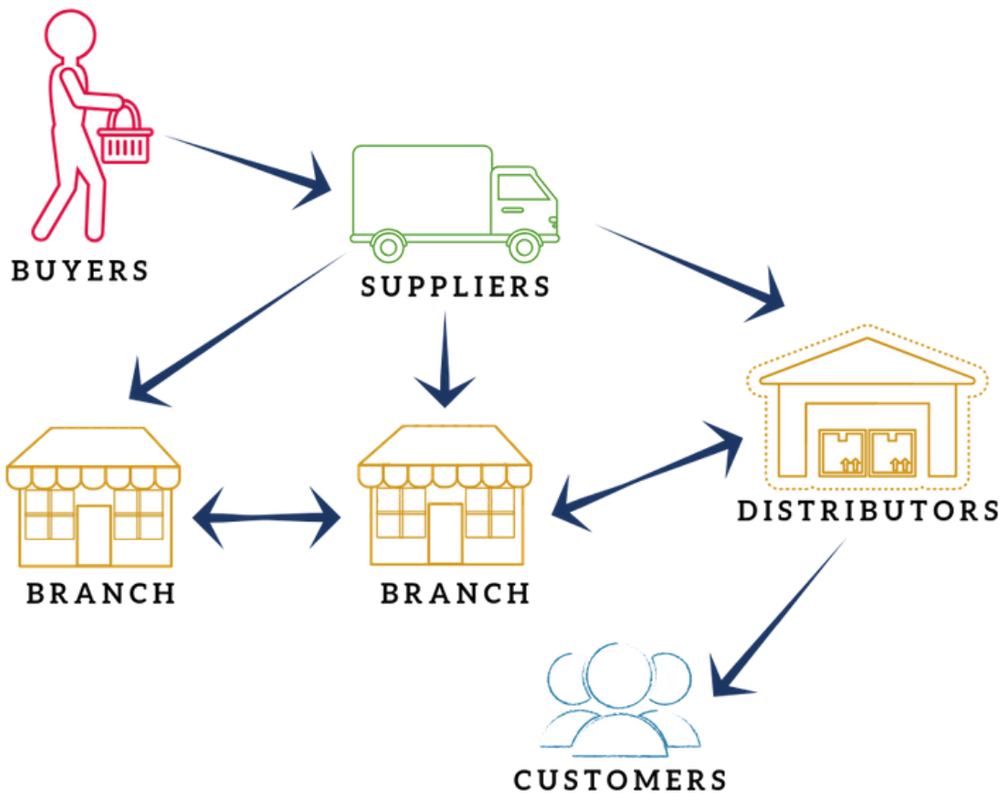
Every single distribution business engages in the Buying Process whether they choose to apply advanced strategies -- or not. The good news is, the science of forecasting, replenishment, and buying have advanced to a point where you can now gain control of your inventory.

In this document we will cover topics in:

- The Replenishment Flow (the situation in which the Buying Process arises).
- K3S Inventory SOOP (our philosophy on how to approach the Buying Process).
- The Buying Process steps and phases. Each step will provide you with some **action exercises** you can consider and apply immediately.

This overview will allow you to gain a better understanding of the Buying Process and help you identify potential weak areas in your process approach. We will also outline ways in which SOOP can assist you with the Buying Process in order to gain a competitive advantage.

The Replenishment Flow



It is important to understand the relationship between Replenishment Flow and the Buying Process. Warehouse distributors exist primarily to offer customers, in a cost effective manner, access to an assortment of products.

These are products that the customer could not purchase directly from the manufacturer in an economic way. Buyers from a distributor purchase inventory from suppliers to go into the company's warehouse(s).Warehouses are then able to ship directly to the customer or to a convenient location for that customer. This, then, creates a stable path of replenishment for the manufacturer, distributor, and customer.

The goal of the Buying Process is to purchase the optimal amount of inventory based on customer demand. The Buying Process encapsulates the steps of Replenishment Flow in which buyers cause inventory procurement and movement to happen. Without the proper tools and approach, this can be an exceptionally difficult procedure in which to advance. Unstable lead times, low fill rates, unpredictable forward buying scenarios, and a large time investment are all signs that the Buying Process is hurting your organization. K3S utilizes the methodology of Inventory SOOP to optimize inventory buying.

Inventory SOOP

In 2012, K3S introduced a methodology called SOOP that describes the four stages a company's inventory management can be in at any given time. Understanding SOOP and the dynamics of these stages will help you navigate through the Buying Process more efficiently and effectively.

Survival: Companies that lack a steady strategy behind their replenishment process likely contain inventory that is in disarray. Some indications a company may be in "Survival Mode" include uncertainty of lead times, too much or not enough inventory leading to undesirable service levels, paying high carrying costs which hurts overall profits, and excessive amounts of time spent creating and processing orders.

Organization: If inventory management remains in the "Survival" state, the organizational leaders will realize that their business can no longer continue to grow. The company will attempt to give products a more accurate and dependable forecast (adjusting for seasonality where needed), supplier lead-times will become more dynamic and accurate, supplier ordering requirements (minimum and maximum order constraints) will be set and implemented, and service targets will become factored into all orders.

The company heads into a transitional state called "Organization." This is a temporary state where, if done correctly, the business will move on to the next stage. If done incorrectly, despite their best efforts, the company will fall back into survival mode.

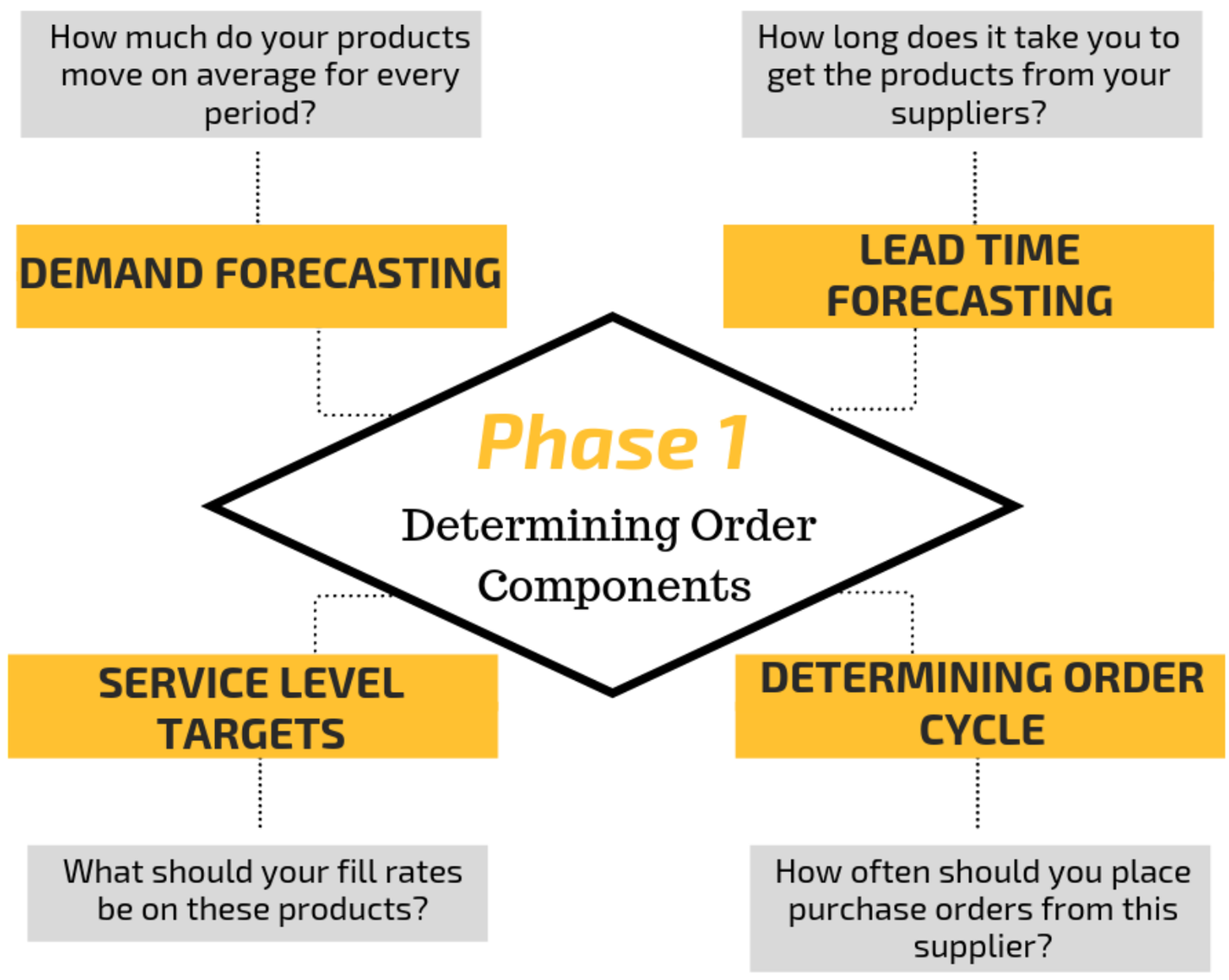
Optimization: If the company has the proper strategies and tools, and if they are successfully able to organize, then they will have done what is necessary to enter Optimization. The results will be balanced inventory, higher service levels, and reduced carrying costs.

Prosperity: Once the inventory management strategy for a particular supplier has been successfully "Optimized," companies will have the ability to use their inventory as a tool to increase profits. A company may then take advantage of forward buying into deals or ahead of price increases. This will improve the number of orders placed so as to reduce receiving cost/order costs. Or, a company may purchase certain products from alternate sources (aka diverters) for increased savings from inventory that they might have required anyhow.

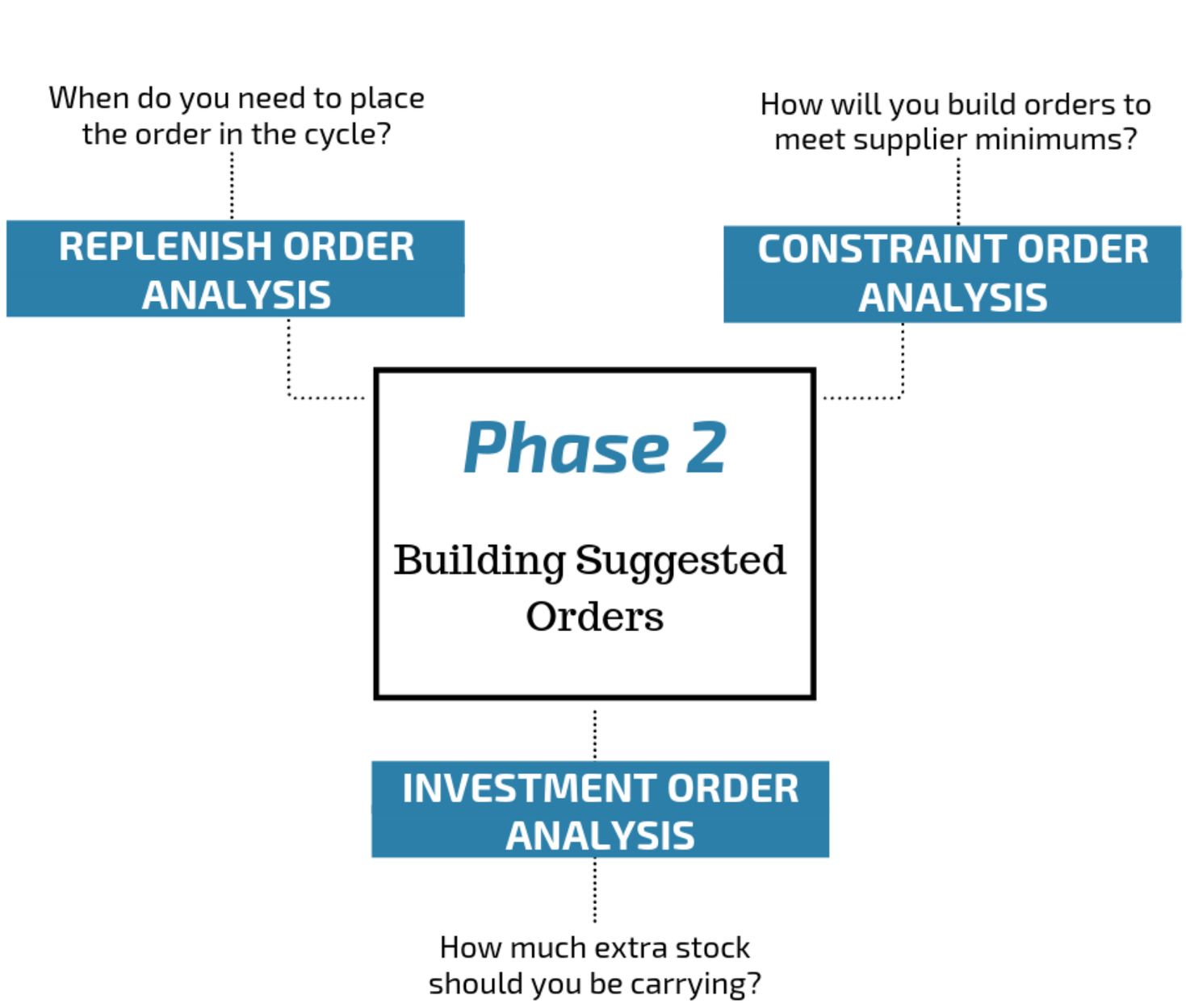
The Buying Process

The Buying Process contains two phases: Determining Order Components and Building Suggested Orders.

The first phase, **Determining Order Components**, focuses on what the requirements are before placing the purchase order.



The second phase, **Building Suggested Orders**, focuses on what is contained in the suggested order.



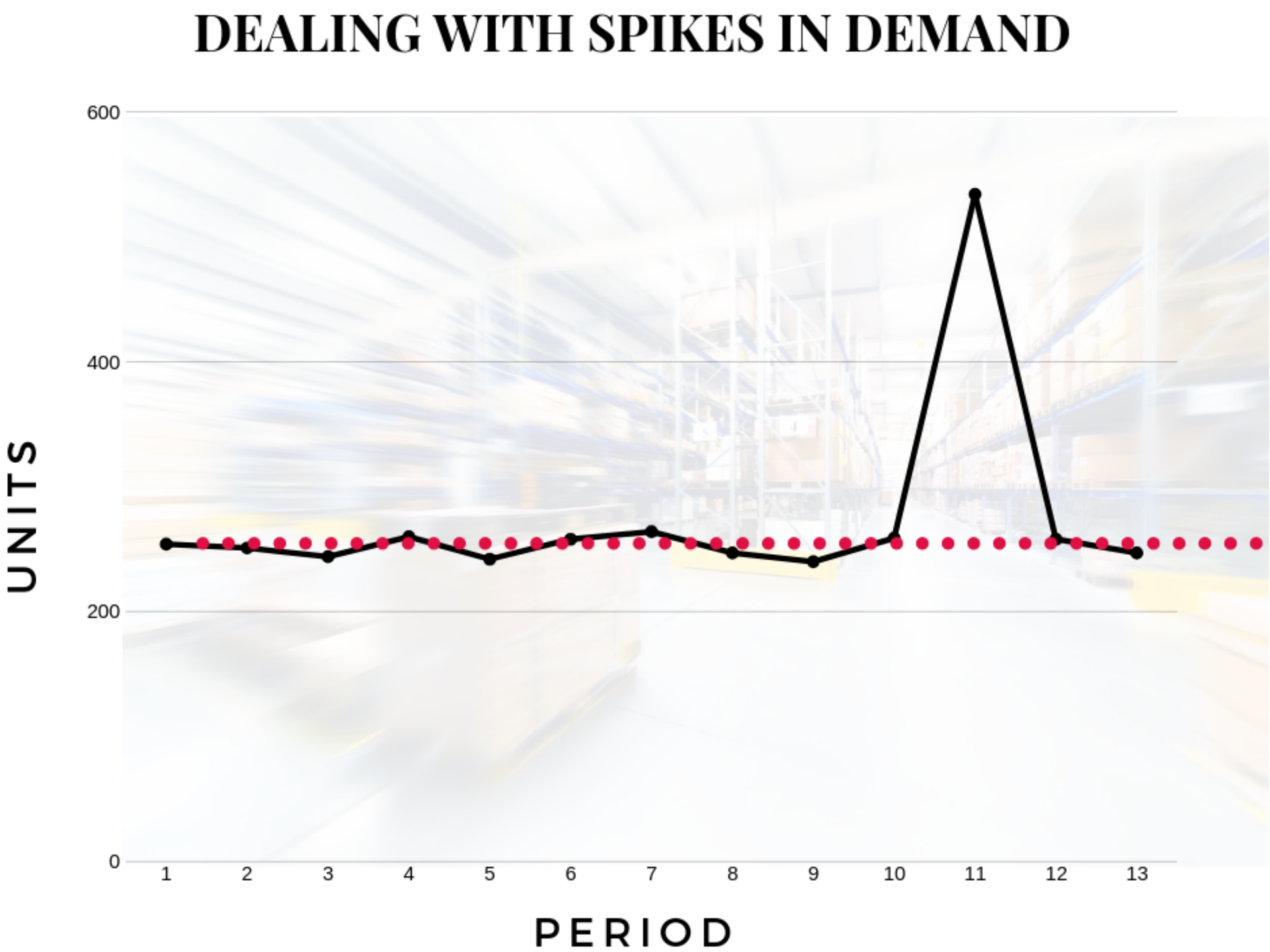
Without an advanced buying strategy such as SOOP, most buyers will attempt to do both phases at the same time when creating and placing purchase orders. This can lead to “Survival Mode.”

With SOOP, however, buyers may focus on Phase 1 through the “Organization” process. Once properly “Organized”, when it comes time to place purchase orders the system will have already created “Optimized” orders; buyers can therefore focus on Phase 2 in placing the orders.

Phase 1: Determining Order Components

Demand Forecasting

How much do your products move on average for every period?



Demand Forecasting is predicting the need of customers based upon historical data. The chart above depicts a product that is moving on average approximately 250 units per period. An assumption would be that in any given period, the company would move about 250 units. In period 11, there is a sudden spike up in demand.

Most companies would increase the product average to keep the forecast accurate. In reality, demand can suddenly spike up or decrease significantly. Unless you are aware of a specific reason for these spikes in demand (new product, new location, gaining or losing a customer, etc.) most of the time these products will return to their original average and it will appear that the spike was but a unique occurrence.

Changing the forecast every time a spike occurs, without a specific reason, will cause service level issues and a suboptimal amount of inventory. Strategies and tools within SOOP will provide information in order to assist you in making the right decision.

Product History and Accounting for Seasonality

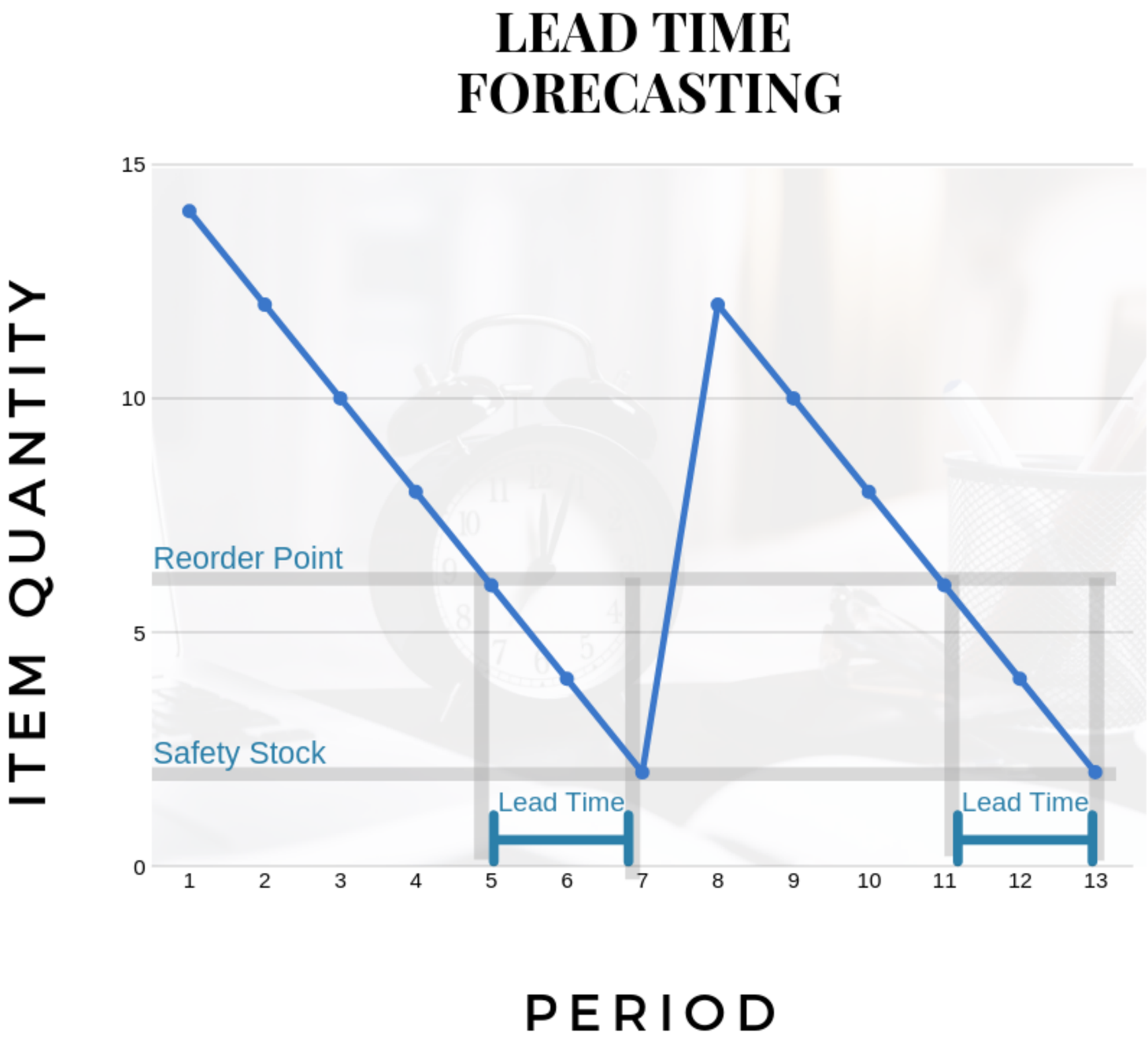
It is vital to ensure that your **Product History** is accurate. Any system that uses a forecasting method requires correct history to be accurate. If your history is incorrect, it will be difficult to determine an accurate forecast.

Accurate history also allows you to adjust the forecast for seasonal products. **Seasonal products**, such as ice cream or snow tires, will have higher demand in specific times of the year and this will be visible only with accurate history.

> ***Action Exercise:*** ***How do you manage your product demand forecasting? Analyze your current forecasting process and results to ensure it is working for your company rather than working against you.***

Lead Time Forecasting

How long does it take you to get the products from your supplier?



Lead time and Safety Stock

When placing an order from your supplier, the time it takes from when you place the order to when you receive the order and when those goods are available for sale -- is the **Lead Time**. For some, this could also include the time required to "put away" or store the items when they are received. Lead Time varies among different suppliers and can change depending upon your relationship with the supplier. For example, one of your suppliers may have a 7 day lead time while another could have a 21 day lead time. Having accurate knowledge of your lead times will be beneficial to you as a buyer because it will lower uncertainty of receiving orders.

Your Lead Time and Lead Time consistency will have a direct impact on your inventory levels and fill rates. It is imperative to determine the right amount of inventory to carry during your Lead Times.

There may be unexpected delays from your supplier or even spikes in demand. It is essential to determine the correct amount of **Safety Stock** in order to avoid potential stock-outs. Lacking an understanding of your Lead Time and Lead Time variance could also cause you to carry too much inventory.

K3S uses its advanced tools and strategies to gauge the past month of Lead Time receipts to establish an average Lead Time. Lead Times will be calculated from the supplier level all the way down to the product level. The system updates these values once per month based on the receipts.

> ***Action Exercise:*** ***Are you tracking an average Lead Time? How do you determine how much inventory to buy based on your current Lead Times? Make an effort to begin tracking and calculating an average Lead Time and Lead Time consistency to ensure you are carrying the right amount of safety stock.***

Determining Order Cycle

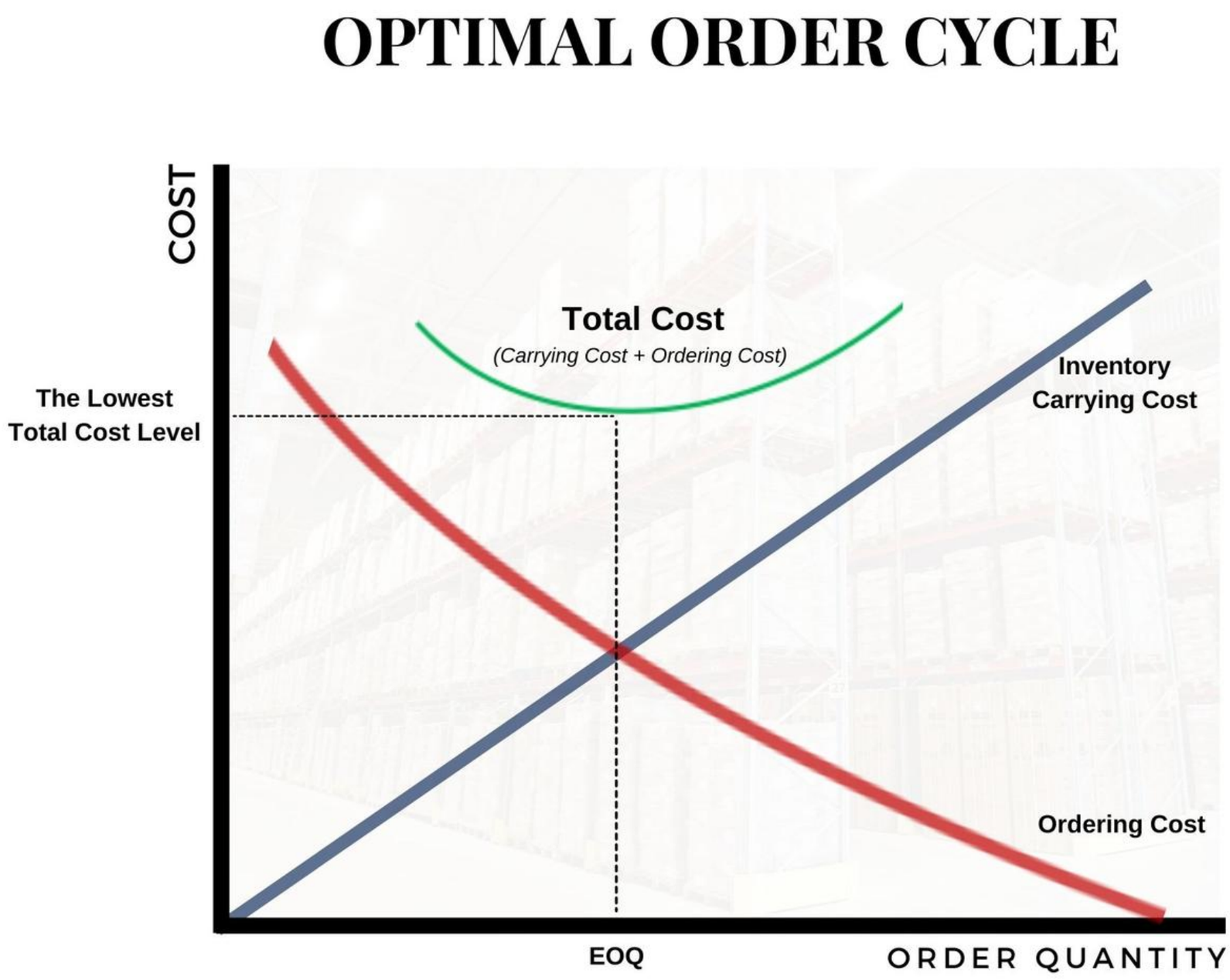
How often should you be placing purchase orders from your supplier?

Finding the optimal Order Cycle

The Order Cycle is the number of days between orders for a specific supplier. A buyer is always trying to find a timely pattern to order their products from a supplier. Two main considerations in trying to determine this ordering pattern are Ordering Costs and Carrying Costs. Ordering Cost is the price required to place the order and receive shipment.

Carrying Cost is the price necessary to hold and store inventory in combination with the lost opportunity cost due to monetary investment in inventory. The placement of more orders means lower Carrying Costs, but also means higher Ordering Costs.

When placing few orders, it can mean lower Ordering Costs but higher Carrying Costs. The idea is to find the right pattern, or Optimal Level, of ordering where the most economic balance between Ordering Costs and Carrying Costs are met.



Using the tools and advanced strategies of K3S, we can help you develop the Optimal Level of ordering for each supplier.

This strategy, called Order Cycle Analysis, utilizes the Economic Order Quantity Model (EOQ) to correctly determine the sum of Ordering Cost and Carrying Cost at the optimal level -- represented in the graph above.

Through the Order Cycle Analysis tools, you will have the ability to compare different order cycles so as to evaluate how much it will annually cost you at any given ordering frequency.

This tool also considers your discount bracket levels to make certain you will meet the specific supplier constraints.

> ***Action Exercise:*** ***What is your current strategy for determining supplier order cycles? Is your strategy allowing you to maximize your profits? How can you improve your supplier order cycles going forward?***

Service Level Targets

What should your fill rates be on your products?

Choosing the correct level of Safety Stock

Safety Stock is the extra stock of inventory maintained in order to avoid a stock-out. Safety stock is important because there are times when expected inventory use exceeds what was forecasted, or there may be possible shipment delay from suppliers.

Determining the right amount of Safety Stock is essential for meeting an expected Service Level. The higher the level of service a company wants to achieve, the larger the monetary investment of safety stock will be necessary. Most companies strive consistently to “never run out” and to maintain a 100% service level.

This expectation, while sounding great in theory, is ultimately not realistic and can cost a company hundreds of thousands of dollars trying to attain the objective that was not likely plausible. This is yet another way the unwieldy beast of the Buying Process can cause a company to go into “Survival Mode.”

Using advanced tools and strategies of Inventory SOOP allows a company to create Service Level goals that are realistic. K3S can assist a company in determining the monetary level of investment or payback in raising or lowering the Service Level on certain products.

Not all products carry the same emphasis within a company’s business strategy. These tools can help you decide which products are worth the higher investment.

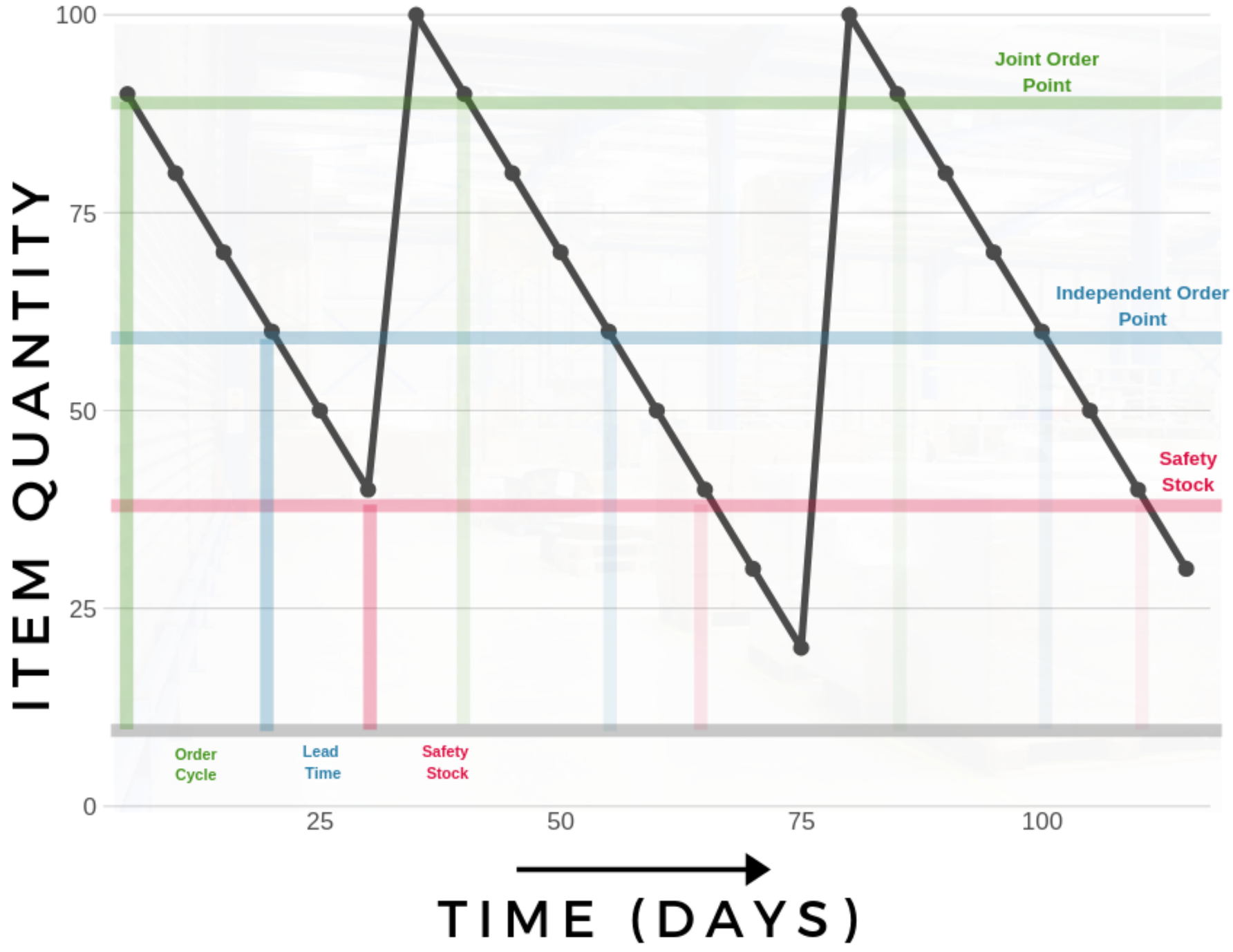
Action Exercise: ***How much extra do you carry for each product? Do you think your service level targets are where they should be? How can you improve your service levels to reduce your excess stock and also maintain your service level targets?***

Phase 2: Building The Suggested Order

Replenish Order Analysis

When do you need to place the order in the cycle?

At some point, an order will be placed to replenish the inventory in the warehouse. When placing the order, it is important to consider just how many units are required to cover the Lead Time and to provide optimal Safety Stock. The Independent Order Point is the most economic amount for an individual product that will meet the needs of Lead Time and Safety Stock.



The Joint Order Point represents the combination of all products across the entire supplier to satisfy the Lead Time, Safety Stock, and other potential requirements of the vendor. Without benefit of the correct tools or strategies to create optimal orders when dealing with potentially thousands of products and/or variables, this can be a very difficult concept for an individual buyer.

K3S uses the concept of Time Supply in order to create balance across any supplier by utilizing tools within Inventory SOOP. **Time supply** can be thought of as the amount of product a supplier sells over a period of time. For example, a company moves 10 units of Product A and 20 units of Product B in one day.

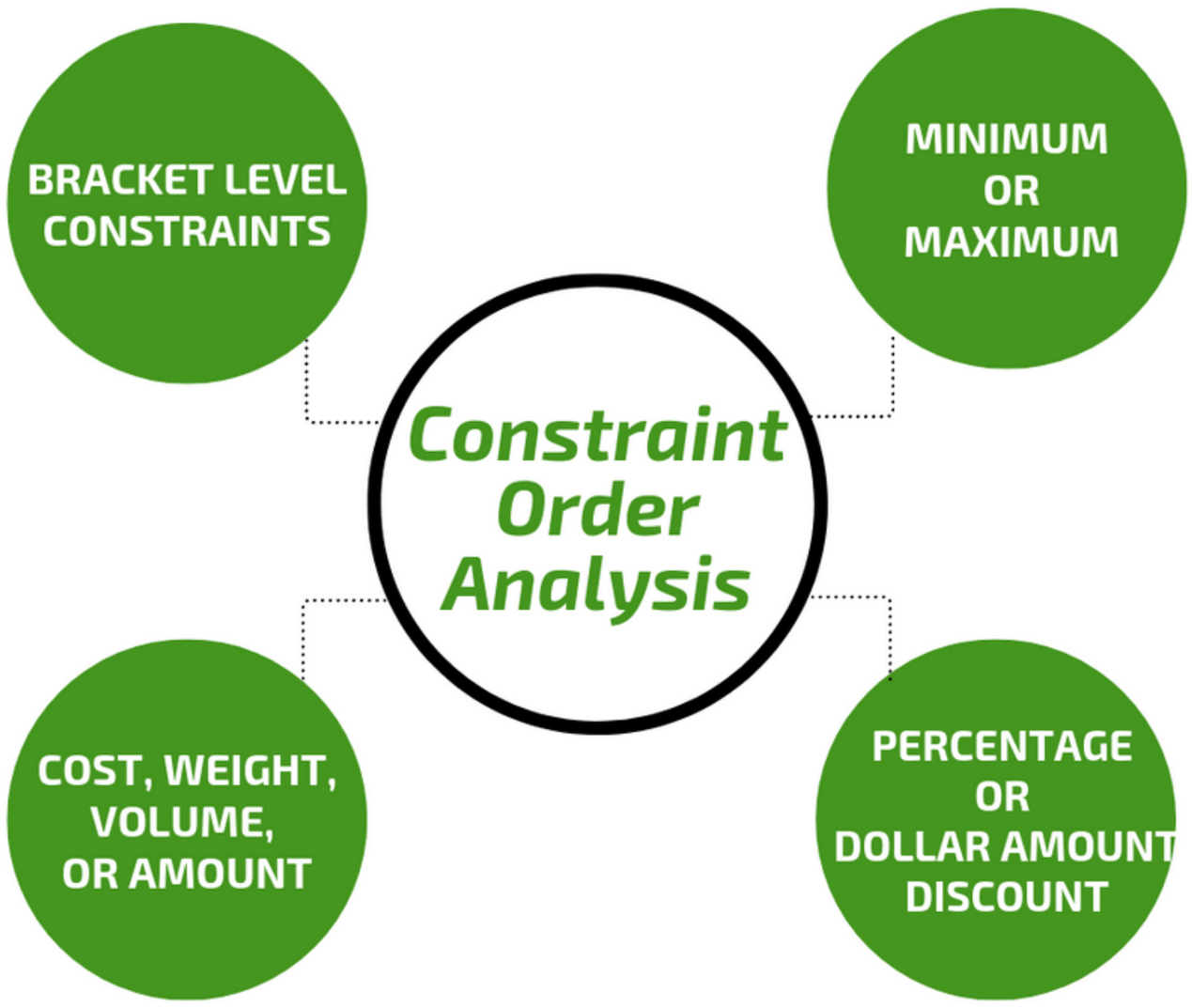
When creating a purchase order, the buyer will want to order an equal number of days of Product A and Product B. This will ensure that the buyer has the same amount of inventory in days on hand. Also, this will prepare them for a new order at the same time.

Even though the buyer may move a different amount in one day, K3S has the ability to create a balanced order so that all products, no matter how fast they move, can be purchased on the same schedule.

> ***Action Exercise:*** ***When reviewing your inventory, how balanced is the supply of your products? Do you have suppliers that have several days of supply for specific products and much less supply for other products? How can you apply steps 1-4 to help you gain more balance in your supply?***

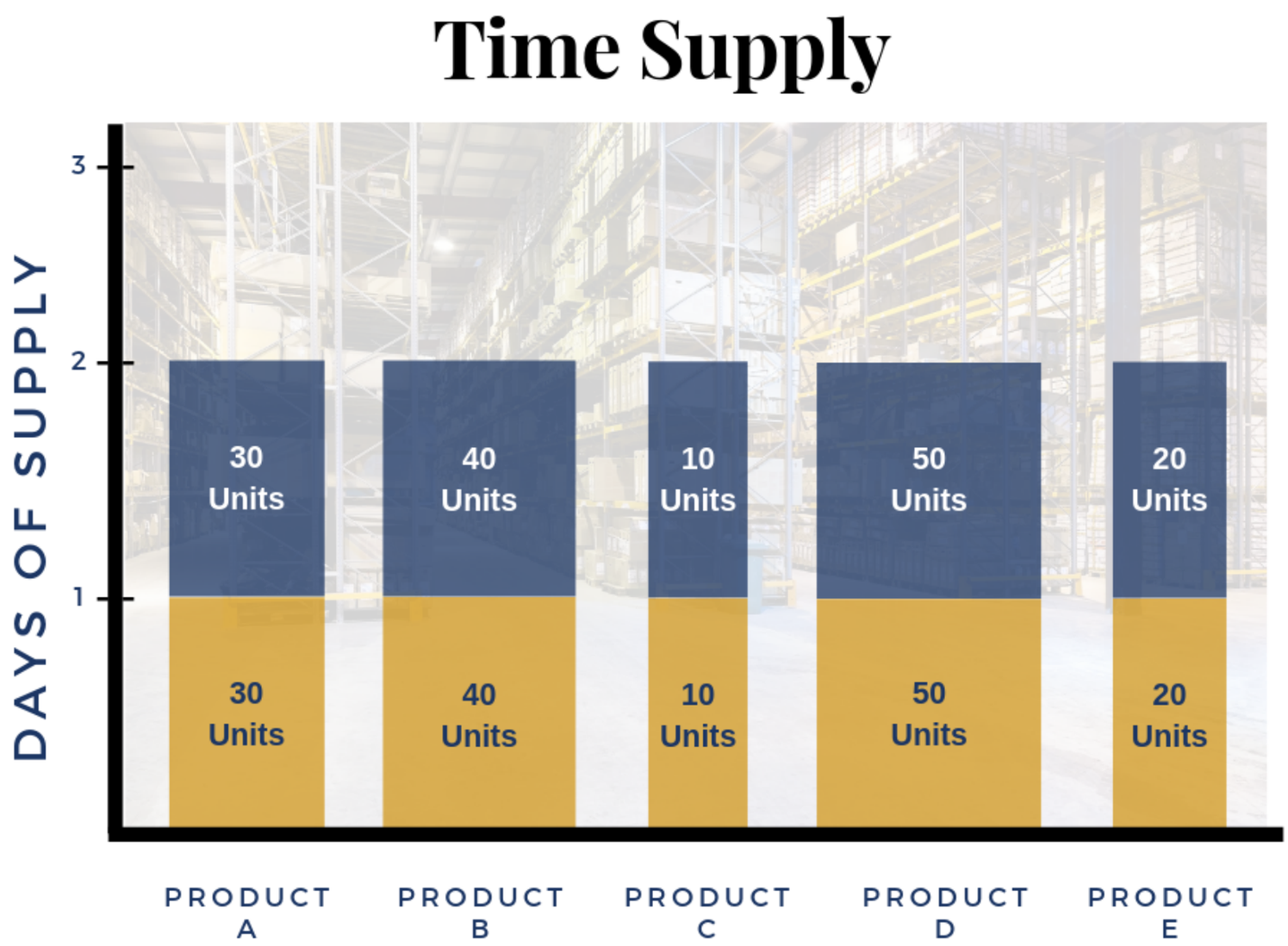
Constraint Order Analysis

How will you build orders to meet supplier minimums?



Your suppliers may have minimums or maximums you must meet in order to place a purchase order -- regardless of the buying criteria. This could include dollars, weight, volume, pallets, and more. Even a small increase in order amount could trigger different levels of discounts. The difficulty in meeting these different minimums and maximums is that when you confirm your Joint Order Point, it may not meet the requirements. Without the proper tools and strategies, buyers could order an unbalanced amount of inventory to meet these requirements and thus throw off the entire Order Cycle.

K3S uses the concept of **Time Supply** to raise or lower the amount of product on a purchase order equally. This helps to guarantee that products are always balanced across time while still meeting the supplier requirements. Furthermore, the K3S system can determine whether or not it is advantageous to order more so as to trigger a discount.



Action Exercise: ***How do you manage your orders to ensure they are meeting your supplier constraints? How often are you making adjustments to your software suggested orders? What are some ways you can balance out your supply and still reach your supplier constraints?***

Investment Order Analysis

How much extra stock should you be carrying?

Investment Order Analysis is the process of buying more inventory than determined by your Joint Order Point. This may be due to potential discounts, promotions, anticipated price increases, dated products, or offerings from alternate sources (diverters).

Common traps of an unorganized Buying Process are these seemingly fantastic inventory investments that may not be beneficial if your supplier is not “Optimized.”

A buyer without the proper tools and strategies is simply not aware if an investment, or the level of investment, will be profitable for the company.

K3S can assist a buyer to determine what investments are most likely profitable and what the correct levels of investment should be. It is not enough to know if an offering could be advantageous.

The buyer must also determine what amount should be invested in the offering based off the company’s needs and use of their products.

> ***Action Exercise:*** ***When you take advantage of discounts, do you invest based on your product's forecasting? Do you consider your Lead Time, Safety Stock, and Order Cycles? What are some strategies you can use to improve your investment strategies and your profits?***

Conclusion

This overview will have given you an understanding of the phases and steps included in the Buying Process. Having this understanding will allow you to competently examine your current methods of engaging the Buying Process and to search for areas of improvement.

K3S has 25 years of experience working with the Buying Process in a number of companies throughout multiple industries. K3S has successfully applied the tools and strategies of Inventory SOOP to help companies around the world gain a more effective and optimized Buying Process.

> ***If you are interesting in learning more about optimizing your Buying Process and increasing your profits, email us at: info@k3s.com***

For more information on how K3S can benefit your business, please contact us:

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