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## What is Supply Chain Management?

Every organization is working toward a specific outcome, whether they are creating a product or providing a valuable service. In working towards this outcome, most companies intersect to become part of a larger supply chain which links the many organizations together.

*A **supply chain** consists of the multiple organizations that work together to ensure a product reaches an end user.*

Because the organizations in any given supply chain are interrelated and codependent, each organization involved must be sure to carefully manage their operations. The manufacturing company responsible for the end product must be careful to manage the operations of the many organizations involved in the process of creating the end result. By doing this, they are implementing **supply chain management**.

Simply put, **supply chain management** is the active management of the supply chains or organizations working together and is absolutely essential.

In the past, organizations focused merely on what took place in their specific workplace, failing to check anything outside of their ‘four walls.’ This shortsighted way of thinking is also a very shortsighted way of managing and leaves room for many problems. By establishing the idea of supply chain management, the projects are more inclined to run smoothly and the outcome successful.

Activities that should be monitored by supply chain management include:

- product development
- production
- sourcing
- logistics
- any information systems used

It is important to remember that supply chain management is not intended to replace other forms of management. Rather it is building upon the earlier successful ideas that were established over time. Looking at successful chains, you will notice that the firms who have successfully implemented supply chain management were also successful in other areas of management previously.

It is also important to note that supply change management often demands major changes in a company’s organizational structure. Furthermore, it is vital to place the responsibility for executing supply chain management at the top levels of an organization in order to ensure utmost success.

Unfortunately many organizations are stumped by the question of how can they, as an individual company, actually ‘manage’ an entire supply chain when they are sometimes struggling to simply manage *their* company.



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Managing a supply chain is no easy task and involves taking steps to improve the communication and flow of materials between oneself and one's suppliers. By improving these factors between members of the supply chain, it is in essence helping *manage*, thus improving the overall success of your organization.

It can indeed be more complex than that; however the overall idea is that by implementing supply chain management, a conscious effort is being made to develop and manage supply chains in the utmost effective and efficient way possible. Making use of the different SCM software that is available can also simplify your job. The right tools can make any job easier, particularly in this case where there are so many components involved.

## Lean Supply Chains

Lean, trim, waste-free. That should be a goal of all organizations. In order to run in the most effective way it is important to implement a 'lean' strategy. By going 'lean,' you can cut all waste including: time, costs and resources. Applying this strategy to your supply chain will ensure that you are on the road to success.

*A lean supply chain produces exactly what and how much is essential for the specific company. It provides the necessary components exactly when and where they are needed without wasting any valuable resources.*

When the supply chain is streamlined to eliminate waste from the overall flow, noticeable improvements can be seen. The supply chain will be more inclined to function and operate smoothly and more cost efficiently.

It is inevitable for supply chains to gain waste at some point or another. However, it is extremely important, any time waste is added, to regain the lean supply chain and minimize any unnecessary time, inventory, costs or other 'waste.'

The impact that a lean supply chain can have on your organization is great. It has been shown that a lean supply chain can reduce:

- Time by 10 to 40%
- Costs by 10 to 25%
- Inventories by 10 to 30 %!

In order to implement a lean strategy, lean supply chain management should come into place. This type of management is not simply 'repairing' the mistakes of someone before you. Rather it focuses on locating and then eradicating waste in terms of time, inventory and costs. This must be done across the entire supply chain and demands continual effort and long term changes.



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Lean supply chains can be attained by following a few rules:

- Obtain commitment from top management in order to gain ongoing support.
- Establish a team for the project of becoming lean – this team must truly understand the concept of lean supply chain.
- Know that lean goes far beyond the four walls of your organization.
- Analyze and map the entire supply chain process, including inbound and outbound components.
- Remove any gaps that create time, a major waste.
- Get feedback from your customers about how well your supply chain runs.
- Don't underestimate the complexity of supply chains.
- Calculate any risks of a lean supply chain.
- Work together with suppliers and demand their utmost performance.
- Incorporate the right technologies.
- Be open to the changes of a lean supply chain.

In a fast driven world where so much goes to waste it is important and very beneficial to avoid wasting anything that does not add value to your organization. By going lean and implementing lean supply chains and their management, you can be on the road to a more smooth, cost effective and efficient business.

## **B2B vs. B2C Supply Chains**

A supply chain refers to all the components that are involved in and around distributing a certain product to a consumer. There are two main types of supply chains and they include **Business to Business (B2B)** and **Business to Consumer (B2C)**.

### **The Main Differences between B2B and B2C:**

- The amount of channels a product must travel through before reaching the end user.
- B2B has less overall channels that are larger in size.
- B2C has a greater amount of smaller channels.

Thanks to technology much has changed, including the relationship between a business and its customers, in addition to businesses working together. Both the supply chains of B2B and B2C have become faster and more successful in creating a global economy; allowing for continued success.

To better understand the difference between the two types of supply chains you must understand the process that businesses go through when trying to reach a specific outcome.



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*For example, if you look at a bicycle manufacturer who needs to purchase wheels for their product, there are only a few channels involved. They would go directly to a tire manufacturer and obtain the needed parts.*

*The channels involved would be:*

**The bicycle manufacturer -> the tire manufacturer -> the raw supplies dealers.**

This demonstrates an example of a B2B supply chain, simple and straightforward.

*On the other hand if you have a certain customer looking to actually purchase a bicycle from a local store, there would be a lot more channels involved. Not only would all the components involved in the B2B supply chain exist, but there would be additional components including the human factor.*

*The B2C chain might include:*

**Customer ->store employees -> cashier -> local store -> bicycle manufacturer -> bicycle parts manufacturers -> raw supplies dealers.**

This demonstrates a B2C supply chain, a little more complex than the B2B.

Another difference to consider is in terms of technology and integration. B2B must take special care to integrate their business partners into their software to ensure smooth processes of billing, reordering, etc.

In the B2B example, the bicycle manufacturer must coordinate with the tire manufacturer to ensure proper communication takes place concerning how many orders will be placed in a specific time frame. Furthermore they must keep record of the tires received and any amounts billed. All these details can be taken care of with integration.

In the case of B2C, integration is not as important since this is most likely the only transaction with the specific customer for the specific bicycle.

Another difference to note is that B2C tends to be a more one way supply chain, with money flowing to the business that provides the service to the consumer. Whereas with B2B, it is more of a two way supply chain, consisting of feedback, interchanging products, information, data, money, etc.

The concept of these two types of supply chains is pretty straightforward. The names tell it as it is. Keep in mind the differences and you will be able to better understand the importance of both.



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## Supply Chain Planning

Supply chains were created as a way to reduce costs and get products to the right people at the right times. However without proper **supply chain planning** this will not happen on its own. Supply chains have great potential in reducing overall costs, getting appropriate materials and producing a positive outcome in a timely fashion. However this will not happen without implementing suitable supply chain planning.

Companies who are looking to improve their businesses and save time and money must be willing to either implement an effective supply chain management plan or improve their existing one. There are many software options, guides and modules offered that assist in effectively planning, thereby enabling your business to reduce time and costs.

It is important to keep in mind that there is not one solution for all companies. The correct planning must fit specifically to your companies needs. A small convenience store for instance is not going to need the same capacity of supply chain planning as a huge department store. Although both require careful planning and execution, it is important to determine which solution is appropriate for your specific business needs.

*Supply Chain Planning provides an inclusive solution for all the planning involved in a successful business, including strategic, operational and tactical planning.*

In short, taking time to implement suitable planning results in some of the following *supply chain benefits*:

- Saving time, money and man-power by simplifying planning processes with beneficial software and planning programs.
- Ability to predict and plan for future demand.
- Reducing waste – excessive inventory, time, etc.
- Ability to optimize supply chain networks.
- Calculating rapidly the time needed for deliveries and other aspects of time planning.
- Ability to handle crisis situations and deal well with all business interactions.
- Having detailed schedules and material plans in one place.
- Improving communication and overall satisfaction of everyone involved in your supply chain, from customers to suppliers to partners.
- Accommodating customer demands quicker and more efficiently.
- Increasing productivity by automating tasks.
- Sharing technical knowledge with everyone in the chain.
- Meeting your business goals and objectives with less hassle and confusion involved.

Although initially costly to implement supply chain planning, it is worth the investment. Complex software, installation fees and training are just some of the expenses you may run into. This initial increase in expenses should not deter you from creating an efficient supply chain. By implementing



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correct planning, you can ensure that your investment is a wise one that will reap many rewards for you and your business, as well as all those who are involved in your supply chain.

## What is Supply Chain Management Software?

Supply Chain Management Software is software that is available to increase your productivity and overall efficiency when dealing with your supply chain. A **supply chain** is simply all components involved in ensuring that a certain product reaches an end user. It can consist on many links (or organizations) that make up the specific supply chain.

When dealing with supply chains, it is absolutely essential to actively manage anyone involved in your specific chain. This concept is called **Supply Chain Management** and includes *managing many organizations and knowing exactly what is taking place on the different positions of your supply chain*. By actively managing all of the supply chain activities, you will be able to maximize customer satisfaction and achieve a sustainable competitive advantage.

Managing one's own company is difficult enough and already demands so much time and attention. And to manage the other sources that contribute to one's company's end product and all of their components, etc. is a more daunting task. This is where implementing the correct software becomes crucial. Having the correct tools can make any job easier and successful. Without the proper tools, even the smallest task can seem as difficult as moving a mountain!

Looking at the market for supply chain management software, it becomes apparent that there are so many options out there, each claiming to be the best solution for your business. It is important to realize what you need in order to find the most suitable software for your business.

Although initially expensive, this is an investment well worth it. There are different software options available to help with each part of the supply chain. By using this software, not only will it be easier to keep the supply chain connected and understand all the different components, but it will also reduce problems because it minimizes the risks of human error. Furthermore, this software promotes better and faster communication with vendors and suppliers world-wide.

### Reasons to adopt Supply Chain Management Software:

- Minimizes problems by reducing the risk of human error.
- Promotes better and faster communication with worldwide suppliers.
- Simplifies employees' jobs who use the software correctly.
- Helps with tracking inventory and managing logistics.
- Keeps the supply chain connected and helps you to better understand all the components involved.
- Helps reduce costs and inventories.
- Reduces time wasting.



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- Optimizes all operations involved in and around supply chain management.

Supply chain software parts are mostly designed to work together. This eliminates some worry when it comes to businesses that are fearful of software conflicts or overlapping features. Essentially it all comes down to choosing the right software for your specific organization in order to make managing all of the components of your supply chain more effectively and efficiently. Keeping supply chain management a top priority will enable you to get the best out of all your operations and help things to run smoothly and on time.

## Service Supply Chain

Supply chains are made up of various segments that work together to allow organizations to achieve success, efficiency and utmost productivity. An important, yet sometimes overlooked segment of the supply chain is known as the ***Service Supply Chain*** - *servicing the customer after a sale has been made*. This segment is in fact a very important one, despite the tendency for companies to assume it is not directly related to product sales or business success.

*Service Supply Chain management* is an untapped source of competitive advantage. In the past, many companies focused merely on getting their product sold and forgot the importance of post-sales service. However, things are changing as customers are becoming more demanding. Not to mention the wide array of options and competition customers can choose from should they be unhappy with your service. In order to ensure the loyalty of customers as well as for the sake of reputation, businesses are forced to perform, even after the sale has been completed.

There are many advantages in attaining superiority in post-sales service. When the customer is happy, business is better.

Some of the advantages include:

- Creating a great impact on improved customer satisfaction and retention.
- More lucrative service contracts
- Higher profit margins result
- A happy customer is more likely to return
- Word of mouth that your services are worth while.

*Consider the example of a man purchasing a dishwasher from a local store. If shortly after purchase it breaks, he is going to expect, and probably demand that the store either repairs his dishwasher or replaces it. Because this store has a reputation to keep and also hopes to maintain this man's business they will do their very best to provide post-sale service to their customers and thereby maintain his satisfaction and business and thus upkeep the service supply chain segment.*

In order to make the best of these post-sale opportunities, companies need to accurately assess their service performance. Creating a clear set of metrics to measure their service performance will enable companies to:



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- Maintain customers
- Keep lower operating costs
- Improve overall service levels
- Ultimately drive greater profitability

Service supply chain management is also known as reverse logistics or service logistics and is a key factor in realizing competitive advantage for many companies. The service supply chain covers many aspects including service parts planning, distribution, and warehousing, repair and recovery operations.

Today supply chain effectiveness is not only gauged by how well a company performs based on orders and on-time deliveries, but also by successfully providing service to the customer even after the sale has been completed. By including this in your management plan, you can ensure that your business will be more likely to maintain and gain customers by keeping them happy. After all, "the customer is always right."

### Supply Chain Benefits

Organizations everywhere are striving to flourish in the best way possible. By attempting to make one's business a profitable success, it will consume most of your time and efforts. It is important however to retain some time and energy to focus on an important, yet often overlooked aspect of the business, *the supply chain*.

Having an efficiently managed supply chain can provide amazing benefits for your company. Although at a first glance, you may not think that the supply chain is directly related to your business' growth and overall productivity, it is indeed. The benefits of a well-managed supply chain are significant and can impact your organization's profitability and success.

By improving your supply chain, you will have a better understanding of the processes that take place prior to completing the final product. Furthermore, you will be better able to run the other aspects of your business more smoothly, because an improved supply chain will simplify many other facets.

Some of the benefits you might notice that are associated with an *improved supply chain* include:

- Ability to **forecast demand and supply** more accurately – allowing you to make only what and how much is needed, precisely when and where it is needed.
- Improved **scheduling and planning** capabilities.
- Better planning -thus **reduced costs for logistics, warehousing, and manufacturing**.
- Streamline your business processes by **computerizing** them – reduce costs since orders are sent electronically.
- **Speed up communication** between partners and suppliers.
- Send orders **faster** and more **accurately**.



- Improve overall performance of **on time delivery** and **accuracy**.
- **Lower your inventory** levels.
- **Respond professionally to unforeseen problems** like machine failures, delays, missing goods, human error, etc.
- **Real time knowledge** of sales rates, inventory and production rates.
- **Reduce human error** thanks to automated processes.
- **Improved customer service** based on enhanced order tracking and automated messaging.

By examining even just a few of the above mentioned benefits, it will become clear that supply chain excellence is an important asset to your company. There are so many aspects of the supply chain that can impact your business in ways you may not have imagined. If you take the first step and work towards benefiting from your supply chain, you will be on the road to success. Without paying close attention to your supply chain, you will be letting a very important competitive advantage go to waste.

Customer relationships as well as partner relationships can be enhanced by simply improving your supply chain. With careful supply chain management, dreams can be attained and success achieved. Happy, satisfied customers and good planning allows you to bring products to the market faster; enabling you to generate larger profits, develop greater efficiency and save costs as well. Although supply chains are indeed a complex area, the time spent in managing and improving your supply chain is not time wasted, but rather gains achieved.

## Supply Chain Problems

Although supply chains are full of benefits and can be a great asset to organizations, developing an effective and efficient supply chain is not always easy. It demands a lot of planning, expensive technology and good connections with reputable suppliers. In addition to developing a successful supply chain, there are a few other major issues that may inhibit it from running smoothly.

A main problem that managers and companies often run into is *finding real cost-reduction* solutions. Usually managers and companies go into supply chain management because of the benefits, and efficiency it brings, but because of the high demand of effective solutions it is become quite costly.

### Some of the main causes associated with cost problems in supply chains include:

1. A business and its partners have not clearly thought out the process of what they are doing – they **lack sufficient guidance** to accomplish the goal of putting together a supply chain.
2. **Confusion** as a result of **not enough planning, training or communication**.
3. An **unfair way of measuring the success** of a supply chain – success doesn't only mean improved profits, but also balanced supply and demand.



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4. **Sacrificing quality** to make up for profit loss can also destroy the supply chains base.
5. **Inability to overcome barriers** that exist between each separate part of the supply chain.
6. **Internal resistance or unwillingness to change** –without flexibility the supply chain will likely encounter problems.

Pre-emptive action is one of the best ways to avoid frustrating problems that slow down your journey to success. Although there are other ways to avoid these problems, the best and easiest way is to deal with potential problems BEFORE they actually occur. Once a problem takes place, certain consequences are inevitable, damage may be irreversible, and you will incur losses.

Therefore, it is essential that companies organize themselves to discuss issues that potentially may lead to problems. By involving all counterparts of their supply chain prior to any actual occurrence of problems, issues like flexibility, barriers, etc. can be dealt with and companies can rest assured that all partners are on the same page in terms of important business matters.

Another important potential problem with supply chains is lack of proper supply chain management! All too often, supply chain management is not implemented fully or by the right people. Many times they are managed by other departments outside of the supply chain organization. Supply chain managers MUST take the responsibility of ensuring that their supply chain runs effectively and efficiently in order to not only control their business, but earn power and productivity.

With proper preparation, planning and overall management you can help your supply chain be a tremendous asset to your company, without the headache of unforeseen problems. By knowing what might go wrong you will be better armed with proper defense and knowledge to help you steer clear of any potential mishaps that could essentially ruin your supply chain. Be cautious and weary when dealing with this important aspect of your business. As always *'it is better to be safe than sorry!'*

## The Demand Chain

The supply chain is made up of numerous links that bind many companies and organizations together for the sake of getting products to an end consumer. One of the aspects of the supply chain is known as the supply chain demand. **The Demand chain is a network of trading partners that extends from manufacturers to consumers.** These partners exchange information as well as goods. Some of the facilities involved include:

- *Warehouses where products are made*
- *Distribution centers*
- *Retailers' warehouses*
- *Retail stores*

These components make up the *main features* of the demand segment of the supply chain.

As with all aspects of the supply chain, good *demand chain management* is essential for delivering the best value to the customer while maintaining profits and increasing your business' overall success.

**Demand Chain Management** is the *active management of the relationships between both suppliers and customers*. The goal is to provide the best value to customers while keeping the costs to the demand chain low as a whole. Supply chain management is almost interchangeable with the term demand chain management. Depending on the demand for specific products, the demand chain management strives to deliver the best respective value with the most efficient service and production.

Managing the demand chain can be a daunting task and includes managing processes involving wholesalers, distributors, retailers and consumers. Many times it is a balancing act requiring timely and accurate procedures combined with precise analytical techniques. This is where **Demand Chain Optimization** (DCO) comes into play.

The DCO objective is *to increase value and profits for any part or the entire demand chain*. It is possible to only optimize part of the demand chain; total optimization may or may not result based on a common objective that may or may not exist.

#### **What the Impact Demand Chain Optimization can produce includes:**

- **Higher customer service** leading to *greater net income*
- **Greater inventory turnover**
- **Lower logistics costs** leading to *decreased operating expenses*
- **Increased worker productivity** also leading to *decreased operating expenses*
- **Lower costs of products sold** – *higher net income*

Thus as products flow through the supply chain, partners encounter costs but at the same time they will be able to enjoy the benefits of a well-organized demand chain with an ultimate increase in profits.

#### **Some of the drawbacks to Demand Chain Optimization include:**

- *Demand forecasting depends on a single approach*
- *Data cleansing is executed perfunctorily, and differentiation between systematic and random change is not handled well*
- *Computational efficiency is not a major concern*
- *Product unit conversions are overlooked as demand is projected up the demand chain*



As with any type of supply chain management, there are drawbacks as well as benefits. In order to reap the benefits and avoid the pitfalls, it is extremely important to fully understand what you are working with, as well as to take the steps to ensure you are amply prepared with a working plan. Furthermore, it is essential to realize your goals and what you hope to achieve by managing the various aspects of your demand chain.

## Supply Chain Inventory

A supply chain is made up of several parts all involved in getting a final product to the customer. **Supply Chain Inventory management** refers to the *management of all inventories in a way that the supply chain will function without lacking or having excessive burdens of large amounts of supplies*. This aspect is a critical part of the supply chain because if managed correctly it can save your business a lot of problems, including money loss!

To begin with, a person who manages the supply chain should be able to *predict the demand and supply* of various products of the company. This forecast should be accurate enough that there will be a more precise estimate of products needed at exactly the right time, without having excessive or shortage amounts.

For example, if the forecast predicts a higher demand in the near future, then greater amounts of the necessary materials must be obtained in order to fulfill the demand of products. It is also imperative that the process be completed on time without running up extra costs.

Correct inventory management entails all processes that ensure the availability of products through inventory administration activities.

**Inventory Administration activities** include:

- *Demand planning*
- *Stock optimization*
- *Monitoring the age of the product*

A crucial factor that helps determine the overall profits of a company relies directly on how well the company's overall supply chain inventory management is. With poor supply inventory management, any company might as well be doomed.

In order to avoid potential disasters, it is essential to make use of the various tools available to assist you in your inventory management. There are many increasingly popular software tools available on the market that help with supply chain inventory management. Many which are inexpensive, uncomplicated to use, even for first time users, and helpful in speeding up various processes involved in this aspect of the supply chain.



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**Costs Associated with carrying inventory include:**

- *Interest on Capital costs*
- *Taxes and insurance*
- *Obsolescence and Depreciation*
- *Storage*
- *Opportunity cost*

**Problems that result from running out of inventory include:**

- *Loss of customers/sales*
- *Bad reputation*
- *Disruption in supply chain*

**Costs associated with poor supply chain inventory management:**

- *Higher costs associated with too much inventory that goes unneeded*
- *Higher costs from storing excessive inventory in warehouses*
- *Loss of sales due to ill-planned forecasting leading to loss of money because of a shortage of the necessary product*
- *Extra costs incurred from any confusion that results from improper planning, etc.*

Although there are costs associated with inventory management, the benefits of a properly managed supply chain inventory clearly outweigh the drawbacks. With an efficiently and effectively run supply chain you can pretty much guarantee profit increase, significant cost savings and ultimate success for your business. If you overlook this important aspect of supply chains, you will be sure to see the hampering effect that it will have on your overall supply chain and your company as a whole.

## **Food Supply Chain**

Oftentimes people are unaware of the long journey down the food chain that food takes prior to arriving in our plates. The reality is that the food supply chains are some of the most important that exist. They are responsible for the multi-billion dollar markets' success or failure. Without proper food supply chains, frustration, confusion, dangerous outbreaks of food associated illnesses and much more can result.

**Food supply chains** are made up of the *all the different links that are involved in getting food products to consumers.*

Food supply chains can be complicated and sometimes very long. They involve many separate businesses working together as well as numerous steps to create a product and then get it to the consumer. By working together, businesses involved:



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- Save time
- Save money
- Avoid possible problems

The Food supply chain system works to get food products to consumers as quickly, efficiently and cheaply possible. By doing this, consumers are guaranteed products every time they go to the local grocer.

An important consideration to keep in mind is that this system is great for getting food to consumers quickly, but if proper care and hygiene is not enforced, bacteria can also spread quickly causing food-related illnesses. Given the nature of food supply chains, food safety hazards can be introduced at any point of the food chain. Thus in order to ensure food safety, all parties involved share a *joint responsibility* in ensuring there are no weak links in the food supply chain, not just for the sake of profits and the monetary aspect, but also for the sake of the consumer's health and overall safety.

Each different type of food has its own set of components that make up a specific food chain. Furthermore, each producer and various stores all belong to various food chains. There is no single food chain nationwide that gets food to the consumer.

A few of the many examples of the **various types of food chains** include:

- *Fresh vegetable food chain*
- *Barley food chain*
- *Beef food chain*
- *Poultry food chain*
- *Dairy food chain*
- *Wheat food chain*

Each of these can be broken up into various subcategories which in turn make up their own separate supply chain.

Finally a look at two general examples of what the various links in a food supply chain might look like should help give you a better understanding of what takes place to get food from the farmer to your fork.

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### **Food supply chains**

*Production → processing → wholesale → distribution → retail and food services*

#### **Or**

*Farm → farming Logistics (agriculture) → manufacturing logistics (food) → retail/ catering → consumer*

As with all supply chains, precise management must take place. By managing all products, information, technology, funds and materials from the suppliers to the consumer, companies are more apt to succeed and customers more likely to be satisfied.

### **Supply Chain Distribution**

The distribution segment of the supply chain is indeed a very important phase. It is responsible for distributing the products to the final stage – the consumer. Without this part of the supply chain going smoothly, products will not make it to the consumer on time or successfully, thus disrupting the entire process associated with an on-time, efficient supply chain.

Some of the **goals of successful supply chain distribution** should include:

- *Decreasing order entry time*
- *Increasing client service level*
- *Integrating your operations*
- *Ensuring successful implementation*
- *Enhancing your competitive edge*
- *Optimizing your total cost of ownership*

Consumers' demands are greater than ever before! In order to survive in today's competitive world, distributors must respond to their demands. The above goals can help streamline the distribution supply chain by providing quicker responses and delivery times. It is necessary to integrate your operations as your organization grows and changes.

One of the most important assets of distributors is *inventory*. Distributors who do not have money invested in the right amount of the correct products will be unable to provide the services necessary to be successful.

In order to be successful, suppliers and distributors must manage strategically their supply chain. This is vital to reducing or eliminating errors. In order to do this, certain *management tools and software* are required. Without upgrading the methods used to manage the distribution supply chain, distributors will find themselves lagging behind.



**Distribution software** is available to help *manage all aspects of the distribution segment of the supply chain, in addition to both internal and external resources more efficiently.*

Some of the aspects **managed by distribution software** include:

- *order processing*
- *inventory control*
- *accounting*
- *purchasing*
- *customer service*
- *supply chain management*
- *sales*
- *inventory*
- *warehouse and finance management*

There are many different distribution solutions available for companies looking to improve their distribution supply chain. Successful supply chain distribution management entails making sure that every link in the chain is able to supply whatever is needed for the following link, without hampering the system with unnecessary inventory.

An example of a distribution solution is a concept known as ‘replenishment.’ This is an approach that moves away from forecasting yet still provides greater fill rates. It uses the same data used to drive a forecast, but only for the initial stocking phase. After that, only actual units sold are replenished. This helps to save money and improve one of the many important links of the supply chain.

### **Supply Chain Forecasting**

Precise and timely demand plans are an essential part of an efficient supply chain. In order to keep sufficient inventory at all times, accurate **supply chain forecasting** must be implemented. This can be a difficult and delicate task to balance. However, with proper understanding and careful planning, supply chain forecasting can help your business perform its best.

**Demand planning** is the system that helps a supply chain plan and forecast more precisely. It is important to take the guesswork out of forecasting; however this can be a difficult task. Fortunately there are technologies that allow manufacturers, buyers and suppliers to work together to create common forecasts and automatically generate orders on demand.

### **Supply Chain Management Forecasting Technologies allow companies to:**

- *Track and evaluate forecasting mistakes to learn from past errors.*
- *Reduce inventory pile up and thus decrease inventory and warehouse costs.*
- *Create automatic orders based on real-time sales information.*
- *Formulate demand forecasts by collaborating with suppliers and buyers.*
- *Identify historical trends and predict demand based on previous data.*



Knowing what to produce and in what quantities is the ultimate goal of manufacturers world wide. However there are smaller goals that most manufacturers hope to accomplish. These may include:

- **Improving accuracy**
- **Improving collaboration** which allows more accurate forecasts
- **Reducing cost by reducing excess inventory** by not ordering parts before the demand for them is verified
- Benefiting from **more scientific data**- analyzing historical data in order to reduce repetitive mistakes.

With all types of technology there are benefits and drawbacks to replacing manpower with software. Although the technology used to better forecast supply chain demand has proven successful in many ways, there are still a few drawbacks to consider.

**Some drawbacks of using forecasting technologies include:**

- Software cannot replace *common sense*, or *insight* that comes with years of *experience*.
- Software cannot predict *buyers' taste* or market response to a product.
- Data can be *contaminated by special events* that confuse the system.
- Software *cannot forecast gigantic or unexpected changes* in the market.

Needless to say, without proper and accurate forecasting many problems will result, not only for the specific company but for all components involved in the particular supply chain.

**Problems that hinder organizations as a result of inaccurate forecasting include:**

- *An imbalanced supply chain*
- *Inability to create predictable and credible financial projections which impact investor confidence leading to a depressed valuation in the marketplace.*
- *Negative effect on the operational effectiveness and efficiency.*
- *Inaccuracy by either over-estimating leading to unneeded inventory or underestimating leading to sales lost.*
- *Customer dissatisfaction.*

Accurate forecasting is a critical factor that helps determine the success of a company and ultimately the entire supply chain involved. In order to better forecast demand, it is necessary to look as deeply as possible into both the supply and demand sides of the situation. Accurate forecasting is necessary to ensure proper resources are at the right place at the precise time needed.

## SAP Supply Chain

In today's fast-paced business world of competition, efficient supply chain management is absolutely essential to survival! There are many ways to ensure that your supply chain is efficient and adaptable.



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One application, known as **SAP Supply Chain Management** is software that can help transform your organization's supply chain from a linear to an adaptive supply chain network. With the constant changing market and the shorter, unpredictable life cycles, this kind of technology is a lifesaver for companies looking to keep up and adapt to the ever changing market.

SAP is the largest European software enterprise and the third largest in the world. Only Microsoft and IBM rank before it. SAP is also the largest business application and Enterprise Resource Planning (ERP) solution software provider. Founded in 1972 in Germany by five former IBM engineers, **SAP stands for Systems, Applications and Products in data processing.**

SAP offers numerous products with its focus being ERP (Enterprise Resource Planning). ERP systems are used to integrate all data and processes of organizations into a single, unified system. Among the many other products that SAP offers the most popular include:

- Advanced Planner and Optimizer (APO)
- Business Information Warehouse (BW)
- Customer Relationship Management (CRM)
- Supply Chain Management (SCM)
- Supplier Relationship Management (SRM)
- Human Resource Management Systems (HRMS)
- Product Lifecycle Management (PLM)
- Exchange Infrastructure (XI)
- Enterprise Portal (EP)
- SAP Knowledge Warehouse (KW)

There are over 100,800 SAP installations at more than 28,000 companies worldwide. SAP products are popular and are used by over 12 million people in over 120 countries.

The reason for its increasing popularity is that it helps you transform a traditional linear supply chain into an adaptive network with the following benefits:

- **Improved response time to changes in supply and demand** -- With increased visibility into the supply chain, you can respond quickly to changes and swiftly capitalize on opportunities.
- **Improved customer satisfaction** -- SAP SCM allows you to meet customer demands, thanks to improved communication and collaboration.
- **Monitors and enables you to comply with regulatory requirements** such as environment, health, and safety.
- **Lower overall costs** -- Information transparency and real-time business intelligence can lead to reduced inventory levels and increased inventory turns and thus an overall improved cash flow.



- **Higher margins** -- Lower operational expenses with timely planning leads to improvements in performance and quality by improved order, product and execution tracking.
- **Greater harmonization with business priorities** -- Improving your organization's overall performance and achievement of goals.

Companies across the world use SAP SCM and other products to help improve their businesses and overall operational success. This supply chain software application integrates collaboration, planning, execution and coordination for your entire supply chain network thus empowering you to:

- *Balance the supply and demand aspect of your business.*
- *Monitor and analyze all aspects of your supply chain by increasing the overall visibility.*
- *Use real-time planning processes to respond effectively to situations that arise in your supply chain.*

## Supply Chain Optimization

**Supply Chain Optimization** is the use of any processes and tools that help ensure the optimal operation of a supply chain.

*Supply chain optimization may include the following:*

- The optimal placement of inventory at various points of the supply chain.
- Minimizing operating costs (including manufacturing costs, transportation costs, and distribution costs).
- Involves the application of technology by using various computer software applications.
- Delivering products to customers at the lowest cost for the highest profit.

Maximizing the profitable operation of a manufacturing and distribution supply chain is the main goal of supply chain managers across the nation. Supply chain management and supply chain optimization are almost interchangeable seeing that both have the same ultimate **goals** including:

- *Reduced supply chain costs*
- *Improved product margins*
- *Lower inventories*
- *Better return on assets*
- *Overall improvement of a company's supply chain*

Supply chain optimization problems tend to require matching supply and demand when one or both of them may be limited. It seems without a doubt, that the most important limited resource is time – time needed to acquire, produce or deliver a product. Since all of these steps require time, a problem



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supply chain managers run into is that demand cannot be instantly gratified, thus leaving room for customer dissatisfaction or loss of sales.

Not only does time sometimes pose a problem, but other resources may also be limited; for instance, there might not be enough warehouse space or a truck's maximum capacity may inhibit meeting the demand in a timely matter. Normally, optimization problems seek solutions for decision that need to be made in a limited resource environment.

**Constraints** that must be dealt with when optimizing your supply chain include all the *limitations* that are placed upon the supply chain plan.

They might include:

- *A supplier's ability to create products.*
- *A manufacturing line that can only run for a specific time each day or workers than can only work a specific amount of overtime.*
- *A customer's or distribution center's capacity to process receipts.*

Constraints can be either *hard or soft* when dealing with optimization problems. *Hard constraints are those that must be adhered to strictly. Soft constraints are those that can be relaxed and sometimes violated.*

**Examples of hard constraints** (must be met):

- *The maximum capacity of a truck*
- *The maximum number of working hours in a shift*

**Examples of soft constraints** (can be violated, however usually with a cost penalty):

- *Customer due dates*
- *Space limitations in warehouses*

*Penalties for not meeting a soft constraint are usually weighted by importance. For instance, missing a due date is of more concern than cluttering a warehouse.*

Overall, **Supply Chain Optimization** is an important part of a successful supply chain. Managers should do their best to ensure that their supply chain is taking advantage of all the processes and tools that will guarantee optimal performance and operation of their supply chain.



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## What is Supply Chain Collaboration?

**Supply Chain Collaboration** refers to *any kind of joint, coordinated effort between two parts of a supply chain to reach a shared goal*. Collaboration in supply chain context refers mostly to what two parties share in terms of information - their business plans, budgets and other forecasting.

No one company can make it on its own; everything is interrelated and interdependent on at least one or many other entities. In order to ensure success, companies must share information with manufacturers and other involved parties. Even companies as big as Walmart and Procter & Gamble have realized the importance of supply chain collaboration and are able to reap its benefits.

An example of how it works can be seen with these two giant companies. After implementing a software system that hooked up the Procter & Gamble to Walmart's distribution centers, they are able to have automatic alerts sent when certain products run low and are in need of restocking. This is beneficial for both sides of the equation. Procter & Gamble benefit because they know when and how much to make, without having inventory pile up at a warehouse. Furthermore, Walmart benefits by having products that are cheap and that come to them precisely when needed in the correct quantities.

Without open communication and collaboration of information, this type of ease would be nearly impossible. Thus the biggest reason that firms collaborate is to *accomplish results that cannot be reached alone*. Despite a company's size, its goals cannot be reached without some form of collaboration.

In addition, collaboration is one of the smartest ways to achieve savings. By letting your supply chain partners into your business, they are able to help plan and innovate ways for getting what you want, when you want it, at as low a price as possible – without anyone experiencing a loss.

Collaboration not only breaks down communication barriers that might exist but it also puts a certain amount of pressure on the parties involved. With all the information at hand, it is difficult to come up with excuses why a party cannot perform acceptably.

Some important points to keep in mind when dealing with supply chain collaboration:

- Collaboration is **more than just a process**, it is about **relationships**.
- Collaboration doesn't work as well when it is **overcomplicated**. It is a **simple interaction where mutual interest must be recognized**.
- **Sharing ownership of the consumer** and allowing **total visibility** of each other's businesses are key to successful collaboration.
- **Relationships deliver success** by allowing for:
  - *Drastically reduced supply chain costs.*
  - *More efficient purchasing of raw materials.*
  - *Improved manufacture planning.*



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- *Increased sales through increased on shelf availability.*
- *Better working relationships.*
  
- **Supply chain visibility is essential** for collaboration to run smoothly.

Many companies are missing out on the savings that supply chain collaboration has to offer. Collaboration should be a simple interaction and a clear solution; unfortunately many organizations have over-complicated the issue and are not taking advantage of this very useful supply chain improvement tool.

## Inventory Planning

Supply Chains across the country are all struggling to overcome a widespread challenge, the challenge of how to find a better way to manage and improve supply chain performance.

A key that is sometimes overlooked is the opportunity to use enterprise and supply chain data to **improve inventory planning** decisions.

Some of the **significant decisions** include:

- *Determining inventory targets*
- *Determining lot sizes*
- *Replenishment plans*

Supply chain managers desperately need to proactively manage their supply chain's uncertainty at all stages. By doing this they can improve their overall chain inventory planning, and thus increase customer service levels while keeping overall costs to a minimum.

Some of the **challenges** that need to be effectively addressed include:

- *Inherent supply and demand uncertainties and inconsistency.*
- *Inventory planning even when capacity constraints exist.*
- *Multistage interdependencies.*
- *Competitive service level and product availability.*
- *Different reasons for which inventory is needed in the supply chain.*
- *Understanding and managing the many aspects of inventory.*

There are many software solutions and inventory planning companies available to assist you in improving your *inventory planning* part of the supply chain. By turning to these solutions you will be better able to see and understand where the biggest and continuous opportunities for improvement are within your supply chain. Furthermore, you should be able to optimize your order fulfillment and reduce inventory, thereby saving money and benefiting your company overall.



Some of the **benefits** of finding the right inventory planning solution include:

- *Optimizing your order fulfillment*
- *Reducing inventory and operating costs with more accurate inventory forecasting*
- *Increasing service levels, customer satisfaction and overall product availability*
- *Increasing planning productivity*

Inventory planning will enable you to forecast, plan and optimize inventory with more accuracy and less effort than ever before. Correct inventory planning will help you determine which items to stock, which ones to order and which ones you have excess of. You should be able to effectively manage huge numbers of items at various locations along the supply chain. Inventory planning can help you spot potential problems before they actually occur, which in turn will save you valuable time and customer dissatisfaction.

## **Demand Planning**

Demand planning is at the heart of all supply chain activities. The demand planning process must be thought out carefully and should provide the best possible insight into what customers want.

Supply planning on the other hand deals with planning behind the scenes to ensure you have the necessary components for delivering a product to the consumer. In essence these are two completely different things; thus supply planning should be independent and secondary to demand planning. In order to ensure that your supply chain planning processes are flexible, efficient and durable over time, demand and supply planning need to be kept separate. What the customer wants is not entirely relevant to other aspects of your supply chain.

The purpose of demand planning is to predict the behavior of your consumers; this of course is a difficult task and can never really be controlled. However supply planning's purpose is to take the demand plan and then schedule for products to arrive before the demand is likely to hit. It is important when dealing with demand planning to not focus on supply. Demand planning focuses on the customer who will not be impacted by different supply planning issues. Your decisions related to developing your demand planning process should be entirely customer focused. Details about supply have nothing to do with true demand.

### **Benefits of Demand Planning:**

- *Increase of sales*
- *Improved customer service*
- *Eliminate redundant and excess inventory throughout your supply chain*

As with most of the planning involved in supply chains, there are many software solutions available to give you a comprehensive overview of demand.

These **solutions** can help you compile the following enabling you to effectively manage your inventory:



- *Demand history*
- *Customer orders*
- *Point-of-sale data*
- *Market forecasts*

Some of the **problems** you may encounter when trying to complete your demand planning are:

- *Instability in the forecasting process – changes as customers change their sentiments*
- *Inflexible supply options*

Demand planning uses the demand forecast as a base for its planning. It provides guidance on how the forecasts will be received through businesses.

**Demand planning allows you to:**

- Make precise customer demand predictions
- Pay close attention to previous product performance history
- Manage inventory replenishment with forecasting
- See how price changes affect product gross margins

## **Inventory Optimization**

**Inventory Optimization** involves *setting inventory at a precise level that will meet customer service demands while maintaining a minimum amount of inventory.*

By fully optimizing your supply chain, you can almost guarantee significant cost savings while at the same time improving your ability to meet customer demands.

There are extensive services available that assist in providing the expertise you might need to optimize your supply chain in the shortest amount of time. Some services that are provided to help in optimizing your supply chain include:

- *Business analysis, assessment and recommendations*
- *Design and planning*
- *Technical analysis, assessment and recommendations*
- *Project management*
- *Integration analysis and consulting*

Striking the most profitable balance is necessary for supply chain excellence. Balance among service levels, lead times, budgets, risks and inventory costs must be attained. To find this balance, a lot depends on how a company's supply, production and distribution are managed. Furthermore what inventory stocking strategies have been implemented plays a part in finding this balance.



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By continuously managing inventory policies you can optimize supply chain performance. *Business objectives, the changing market condition, risks and supply chain constraints* all influence the decisions put into inventory optimization planning.

Managing *inventory policies* includes:

- Knowing what inventories to carry
- Where and in what form
- Knowing correct quantities of inventory during the different stages of the supply chain:
  - Procurement
  - Manufacturing
  - Distributing

An example of inventory optimization solution can be seen when you look at the “*i2 inventory optimization solution*.” This solution enables an organization to improve their service levels, minimize inventory costs and at the same time reduce lead times. It enables peak efficiency by ensuring companies maintain the desirable levels of inventory precisely when needed and eliminate excess inventory.

**Inventory Optimization solution can offer:**

- *Analysis of transactions, customer buying patterns, and inventory performance*
- *Superb inventory policy determination*
- *Multi-stage inventory and postponement optimization*
- *Composition and analysis of possible scenarios*
- *Actual performance monitoring for continuous improvement*
- *Rapid integration*

**Benefits of Inventory Optimization might include:**

- *Reduced inventory levels, expediting, and overall logistics costs*
- *Increased service-level performance and overall customer satisfaction*
- *Improved inventory turns*
- *Improved inventory performance*
- *Improved product availability*
- *Reduced carrying costs, risks, and cash-to-cash cycles*

In today’s highly competitive, cost-conscious business world, supply chain managers are often struggling to find the balance between reducing inventory and increasing customer service levels. This balance can be hard to achieve, but once it is you can ensure that your supply chain will improve from the overall benefits that accompany inventory optimization.



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## Service Level Optimization

The term **service level** is used in Supply Chain Management and in inventory management to measure the performance of inventory systems. Service level management is one of the most important metrics of the business support, value, performance and success.

The *goals of Service Level Optimization* should include:

- Finding the *optimum service level* for each of the finished goods within each channel, based on:
  - Your network capacity
  - Lead times
  - Costs
  - Margins
  - Backorder penalties
- Finding a system or location level inventory investment target and *realizing what assortment of items should be carried at each location and what levels*.
- Knowing *how much inventory* of which item should be reduced to reach the inventory reduction target without having a huge negative effect on service.
- Knowing if *inventory investment or space requirement will exceed affordability level* if a company should offer specific service commitments to the sales channels.

**Service level optimization** can improve your working capital efficiency and make optimum use of your network capacity. There are many services available to help you reach your optimum service level. It is important to find the right service for your business, in order to reap the most benefits.

If you are striving to meet service levels and still optimize the efficiency of your working capital and fixed assets than you should definitely find the right service level optimization service. The proper service can help you to:

- *Maximize the return on your overall inventory investment or storage capacity*
- *Establish the fill rates to quote your customers in order to operate profitably*
- *Calculate the profitability of service level agreements and adjust them accordingly*

The common force driving many strategic business initiatives is the *need and desire to deliver the highest possible service level to customers*. Metrics related to service and end-user transaction quality levels are striving to facilitate more effective communication and understanding between the various stages of a supply chain, in order to provide the highest service level possible to consumers. It is a very common goal of managers everywhere to create service levels that are providing optimal customer satisfaction.

In order to achieve and maintain optimal service levels, managers and those involved in providing optimal service must know all that can be known about elements affecting the consumer at any



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time. Without arming oneself with the proper consumer knowledge, the service level optimization efforts will be restricted and result in less than desirable outcomes.

## Product Supply Chain

The focus of supply chain managers should be developing a product that best suits their consumers' desires at the lowest and most effective cost possible. The focus should be customer driven and not solely focus on other aspects of the business. Doing this almost guarantees that your company's goals will be reached, since a happy customer usually yields many beneficial outcomes.

Despite the importance of consumers and the demand aspect of the supply chain, it is still necessary to recognize the importance that must be placed on the *product* segment of the supply chain.

The product is indeed an important part of the entire process because without the proper products, customers will take their business elsewhere, resulting in overall losses for the company.

*Product development is the entire process of designing, building, operating and maintaining a good or a service. The correct product development process will help ensure that your company not only manufactures any product, but that it manufactures a product that people will desire, buy and continue to use!*

It is extremely important that the customers' desires are not lost in the excitement of creating new products and improving your business. The focus must remain clear; satisfied customers are the key to success.

**Product development** also focuses on:

- *Pricing*
- *Marketing*
- *Customer support*
- *Overall customer benefit*

**Product development includes team members** who all work towards making a finished product that will impress the consumer.

They may include:

- *Product managers*
- *Software developers*
- *Project managers*
- *Product operation engineers*
- *Customer support managers*
- *Product quality assurance engineers*
- *Marketers*



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- *Financial personnel*

The role of product managers is to lead, coordinate and supervise the work of all people involved in making the product a reality. Furthermore the product manager is responsible for:

- *Launching the product, operating it, and managing it through its life cycle*
- *Defining and planning product enhancements*
- *Managing products contracts and sales*
- *Setting strategic goals based on customer needs and business aspirations*
- *Making proposals to senior management*
- *Evaluating risks and tradeoffs*

Much of the work of supply chain managers involves making sure the correct products are designed, manufactured and distributed from the very starting point all the way to the end customer. This can be a long and sometimes challenging process. With careful planning and understanding of the *product supply chain*, you can ensure a successful supply chain that yields great company benefits.

## **Inventory Optimization Software**

The challenge involved in inventory optimization is that you are setting targets for the real world, not a perfect world. This can lead to confusion, frustration and increased costs lost in sales or excessive inventory.

**Inventory Optimization** is a *balancing act* that many supply chain managers find themselves juggling. *The goal is to maximize customer service levels with the least amount of inventory.* More inventory means more costs and more risk of losing money if demand is not predicted correctly.

In order to achieve the best results when attempting inventory optimization, it is important to find the right services that can help you strike the perfect balance of inventory and customer service levels. There are numerous inventory optimization software available on the market today. Inventory optimization software and solutions are designed to *take the complexity out of balancing the key elements so that you can achieve an effective balance* and continue to raise the levels of success at your company and throughout your supply chain.

The tools should:

- *Define*
- *Measure*
- *Analyze*
- *Improve*
- *And control your overall performance*



*Advanced analytics, simulation and inventory optimization software* are just a few of the tools you should ensure your solution is supported by. They should include *demand sensing and modeling, inventory mix optimization and responsive replenishment* to create a dynamic system that will produce highly automated inventory optimization at all points of the supply chain.

Companies across the world, in various countries, rely on inventory optimization software to help build their businesses. They depend on optimization software to create a competitive advantage by accurately setting safety stocks and various inventory targets that in turn allows them to increase customer service levels and still cut inventory costs by percentages near 40 or even 50 %.

*Simulation software* is another tool that helps business personnel visualize a real time example of projected outcomes based on different levels of inventory for various demand situations. This allows manufacturers to break through performance barriers and attain new levels of overall improvement.

The right software should help you:

- *Analyze the flow of material through your business.*
- *Design an organized flow of inventory that maximizes throughput.*
- *Reduce inventory without sacrificing customer service.*
- *Develop measurements to help everyone involved see if inventory is moving properly.*
- *Highlight potential problems.*
- *Analyze optimum inventory levels at every stage of the supply chain.*
- *Ensure you have the perfect amount of what you need and a lot less of what you don't.*

Inventory can be one of the most expensive investments a company makes, thus it is important to manage it wisely. Although some software can be pricey, if you are able to reduce other costs elsewhere, it will be an investment well made.

*Inventory Optimization Software* can take the guesswork out of deciding exactly how much inventory is needed and how much safety stock you should keep on hand, based on your specific situation. Inventory Optimization Software is a timesaver and ultimate cost reducer. If implemented correctly, you can benefit your business a great deal.

## **Stock reduction**

*Stock Reduction* is part of an important process that will help companies reduce costs if the proper steps are implemented. In order to reduce stocks and still maintain sufficient inventory to provide desired products to the end consumer, a careful balance must be in place. Without this balance, your company can run the risk of reducing stock too much and thus losing sales based on not enough of the right product, when and where it is needed.



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Reducing stock too much can be a potentially deadly mistake for your companies' survival. Without customer satisfaction, you can easily and quickly lose money by losing your customers. Although it is important to ensure you have enough stock, it is important to make sure you are not hoarding excessive amounts or else you might be wasting money in an unprofitable way.

How you determine inventory levels will help determine whether your company will be successful and profitable. It is extremely essential to figure out how to keep enough inventory to maintain high customer service level, while at the same time keeping less inventory than your competitors.

Inventory consumes space, has potential to get damaged and at times becomes obsolete. Therefore it is of absolute importance that inventory is *carefully* managed.

Some of the costs associated with too much stock (in addition to the actual cost of inventory) include:

- *Rent expenses*
- *Handling costs*
- *Greater product damage*
- *More frequently encounter obsolete products prior to turnover*
- *Longer delay in noticing quality errors*

Some of the ways to reduce inventory without losing customer service levels include:

- *Reducing lead times for product replenishment* – reduce the time from when you first determine demand for a product until it arrives at your door. The shorter the lead time, the less complex the inventory management will be.
- *Ensuring lead time reliability and accuracy*
- *Ranking your stock items*: put emphasis on the most important item
- *Eliminating obsolete stock*: Hoarding stock that is out of date burns up cash and space costing you profits. Move out old stock and make room for the new.
- *Understanding your customers*: tune into the needs and demands of customers, ultimately you are trying to get their loyalty and business.
- *Adjusting your stock gradually*

By implementing the above strategies you can reduce stock without reducing customer service levels. Creating a lean supply chain involves eliminating any waste – including excess stock. By reducing stock, your company can be on its way to implementing a lean supply chain system and increasing your overall profits by decreasing unnecessary costs.

## **SCM vs. ERP**

There is a lot of planning that goes into managing a business. Two main concepts in the business world that managers know well are **SCM** and **ERP**.



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**SCM** is short for **Supply Chain Management** which is the *process of planning, implementing and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible.*

**ERP**, on the other hand, *is a business management system that integrates all aspects of a business, including planning, manufacturing, sales and marketing.* It stands for **Enterprise Resource Planning.**

Both SCM and ERP are valuable tools for business managers and help business' streamline their processes and efficiently manage many aspects of their company. By implementing these processes, managers can increase their customer satisfaction, lower costs, better manage inventory and more.

Supply chain management focuses on the business' supply chain. It deals with all aspects of creating and moving raw materials through the processes until it reaches its final destination – the consumer. It includes the active management of several stages including:

- *Sourcing*
- *Procurement*
- *Conversion*
- *Logistics management*
- *Coordination and collaboration*

Enterprise Resource Planning focuses on integrating all data and processes into a single, unified system. Typically an ERP system uses multiple components of computer software and hardware to achieve integration. In order for a software package to be considered an ERP system, it would generally need to provide functionality in a single package what would normally be covered by two or more systems. An example of an ERP software package can be one that provides both payroll and accounting functions, like *QuickBooks*.

These software applications help managers implement ERP into business activities like:

- *Inventory control*
- *Order tracking*
- *Customer service*
- *Finance and human resources*

A key factor of ERP systems is the *integration of data* from all the different aspects of an organization. In order to do this, an ERP system usually runs on a single database instance with several software modules providing the different business functions of an organization. ERP software is beneficial in that it *standardizes and reduces the number of software specialties required in a large organization.*

Supply Chain Management also integrates business information. In the case of SCM, supply and demand management is being integrated with and across various interdependent companies.



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Both **SCM** and **ERP** are used to simplify matters in businesses. Processes that were once complicated can be made easier with these systems. With proper SCM, supply chains have increased visibility and better communication between partners and suppliers. This allows for better planning and overall management. With the correct ERP software, difficult planning and organizational tasks can be simplified and integrated into one functional system.

### **Potential Supply Chain Management Software Problems**

Supply chain management (SCM) is a priority for business managers across the nation. They turn to SCM software for help. SCM software provides benefits by helping increase your productivity and overall efficiency when dealing with your supply chain. Unfortunately it is not as simple as it sounds and sometimes managers run into various problems that make them question whether or not their investment in SCM software was well made.

A recent study by Capital Consulting and Management Services revealed that the majority of investments in supply chain software have not paid off in bottom-line improvements. Unfortunately fewer than 20 percent of companies believed that their software package has shown a clear return of investment. This can be disappointing since managers rely on this technology to help them complete their job.

Some of the problems that businesses encounter include:

- *Product complexity*
- *Inadequate management*
- *Resistance from employees and internal stakeholders*
- *Employees who lose confidence in the system after one small error*
- *Technical support (both internal and external)*
- *Implementation lead times and flaws*
- *Poor project management*
- *Unrealistic customer expectation that lead to customer dissatisfaction*

Supply Chain Management Software is one of the most difficult systems to effectively put in place. If done correctly it can yield tremendous financial benefits for companies. By automating supply chains, some companies have saved millions. However SCM software implementation problems are common, although not detrimental, if dealt with correctly.

Without thoroughly preparing employees for new SCM implementation, you can almost guarantee problems to arise. Employees must be comfortable with the new system in order for it to run smoothly at all levels of your organization. Without a certain level of comfort, employees are more inclined to resist the new technologies and cling to the comfort that came with their old ways, albeit their inefficiency. It is important that they are familiar with how the software will make their job easier and more efficient as well as how to actually use the new software.



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An additional problem that you should be aware of is that rarely will SCM software be 100% compatible with your existing ERP systems. It will take some modification in order to accommodate the new SCM system.

Basically it is important to realize that SCM software cannot be adopted without special care. Careful planning and preparation must take place to ensure that employees, suppliers and existing technologies are ready to assist in making the implementation of SCM software successful. Furthermore, we can look at the problems other companies have had in the past and learn from their mistakes. By understanding the potential problems, companies can try their best to avoid them and ultimately improve their company.