

# What is Supply Chain Management?

# A BEGINNERS GUIDE FOR DIGITAL TRANSFORMATION

## What is Supply Chain Management?



Supply chain management (SCM) is a process that includes the planning and coordination of all activities involved in sourcing, procurement, conversion, and logistics management. It is a strategy through which businesses streamline their supply chains to improve efficiency and effectiveness while reducing costs.

The ultimate goal of SCM is to create a seamless, integrated system that delivers the right product, at the right time, and in the right quantity to the customer while minimizing waste and maximizing profitability.

There are three key elements to supply chain management:

- 1. **Sourcing**: This involves the identification and selection of suppliers who can provide raw materials, components, or finished products needed by the company.
- 2. **Procurement**: This is the process of negotiating contracts and prices with suppliers, placing orders, and managing supplier performance.
- 3. **Logistics**: This encompasses all activities involved in the transportation and storage of goods, from the point of origin to the point of consumption.

The goal of SCM is to create a system that integrates all of these activities to deliver the right product, at the right time, and in the right quantity while minimizing waste and maximizing profitability.

SCM is a critical function for any business that relies on the flow of goods and materials to produce finished products or provide services. An efficient and effective SCM system is essential for meeting customer demand, reducing inventory costs, and maximizing profits.

## Benefits that can be achieved through supply chain management:

- Streamlined operations
- Reduced inventories
- Increased sales
- Improved customer satisfaction
- Shortened product life cycles
- Reduced production costs

#### What Happens if a Supply Chain is Broken?

Supply chains are the backbone of an organization and can be critical to success, yet they are often complex and ever-changing.

Supply chains are often broken because of a lack of communication and coordination between the different parties involved. This can lead to delays in shipments, errors in orders, and other problems that can disrupt the flow of goods and materials. In addition, supply chains can be disrupted by natural disasters, political instability, and other unforeseen events.

A broken supply chain can have a major impact on an organization, including decreased sales, higher production costs, and lower customer satisfaction. In some cases, a broken supply chain can even lead to bankruptcy.

Thus, it is important for businesses to carefully manage their supply chains and to have contingency plans in place in case of disruptions.

#### Key tips for managing a supply chain:

- Establish clear objectives and KPIs.
- Define roles and responsibilities.

- Build relationships with a diverse group of suppliers.
- Implement effective communication protocols.
- Monitor the supply chain regularly.
- Have a contingency plan in place.

#### Why are Global Supply Chains Struggling?

There are several reasons why global supply chains are challenged within our current business climate. One of the key reasons is the increasing complexity of supply chains. With businesses operating in multiple countries and across different time zones, there are more opportunities for things to go wrong.

In addition, the rising cost of labor, transportation, and raw materials is putting pressure on profit margins. Another challenge is the growing number of regulations and standards that need to be met. Geopolitical tensions and natural disasters can also disrupt supply chains.

Despite these challenges, global supply chains continue to play a vital role in the economy. They allow businesses to source materials and products from around the world, which helps to keep costs down. In addition, they provide an important link between suppliers and customers.

#### Supply Chain Management Tools

Supply chain management software is a type of business software that helps businesses plan, execute, and monitor their supply chain operations. It can be used to track inventory levels, orders, and deliveries. In addition, supply chain management software can help businesses optimize their shipping routes and schedules. These tools can also be used to monitor supplier performance and compliance with regulations.

#### Examples of SCM systems are:

- Oracle SCM Cloud
- SAP Ariba
- JDA Software
- Infor
- Sage X3

Supply chain management software can save businesses money by helping them to optimize their operations. For example, the software can help businesses to plan efficient shipping routes and schedules. In addition, supply chain management software can help businesses to track their inventory levels and to avoid stockouts. By carefully managing their supply chains, businesses can ensure they are future-proofing their business and avoiding any revenue loss.

#### How to Select SCM Software

There are a few things to consider when selecting SCM software for a business. One is to think about the specific needs of the business and what type of software would best meet those needs. Another is to consider the budget and whether the software is affordable.

It is also important to think about whether the software is easy to use and whether it will be compatible with other software that the business uses. Any tool will need to effectively integrate with the other systems within the business to maximize business value. Any new system or technology will require data management and sharing strategy.

Data is important in supply chain management because it helps businesses to track their inventory levels, orders, and deliveries. In addition, data can help businesses to optimize their shipping routes and schedules. Data can also be used to monitor supplier performance and ensure compliance, especially for global supply chains.

Many ERP systems have supply chain capabilities or applications. Moving back to the examples above - Oracle, SAP, JDA, Infor, and Sage. Each of these systems has different features and functions that can be used to manage a supply chain as well as other functionality in a variety of business areas. If your organization has a current ERP suite, be sure you understand the current capabilities.

#### **Internal and External Support**

There are several factors that can affect the success of a supply chain. One of the most important is the management of the supply chain. Internally, an effective supply chain manager will have a deep understanding of all aspects of the supply chain, from sourcing and procurement to transportation and logistics. They will also be able to utilize a variety of tools and resources to help manage the supply chain.

One of the most crucial and underutilized tools for supply chain management is expert advice. Many experts, like our team at Third Stage, have extensive experience in managing supply chains, especially within specific industries. These experts can provide valuable insights and recommendations that can help improve the efficiency of a supply chain. In addition, they can help identify potential problems and offer solutions or recommendations for tools and strategies.

If you have questions about supply chain management or systems, please feel free to reach out to me directly, kyler.cheatham@thirdstageconsulting.com. Also, be sure to download our newly released 2023 Digital Transformation Report.

## What is a Digital Supply Chain?

[Digitization of Supply Chain Management]



The 2020s are witnessing a rapid digitization of supply chains, and it's a trend that's only accelerating. Let's discuss what a digital supply chain is and what it means.

At Third Stage Consulting, we focus on helping organizations improve their supply chains through automation and technology. The COVID-19 pandemic has made it clear that supply chain improvements are crucial for organizations to navigate uncertainty in the 2020s and beyond. In this article, we will discuss the major components of a digital supply chain and how they can be applied to your organization. To learn more about best practices for digital transformation in supply chains and other business functions, you can download our annual digital transformation report. This report provides strategies and best practices for organizations going through supply chain transformations and overall digital transformations. You can access the report at the bottom of this article.

#### **Improved Business Processes**

The first characteristic of a digital supply chain is improved business processes. To have a digital supply chain, businesses need to start with defining their business processes. Supply chains are complex and cross-functional, spanning from customer orders to procurement, production, storage, shipment, cash collection, and future forecasting. To transform supply chain processes into a digital supply chain, businesses need to define their future state supply chain. A common process improvement in the 2020s is diversifying the vendor base. The pandemic highlighted the risks of overdependence on certain vendors, and diversifying the vendor base can reduce that risk. The digital supply chain requires defining process improvements and identifying technologies that will help achieve those goals. Measuring and tracking the vendor/supplier scorecards is a potential process improvement. To learn more about the basics of supply chain management, check out other available resources.

## Better Supply Chain Technologies

Once you have defined the desired improvements to your supply chain processes, you can start looking at the different technology options available in the market. These options include supply chain management-specific software vendors like Manhattan Associates and Blue Yonder, which provide end-to-end automation for supply chains. Alternatively, you can opt for more specialized solutions that focus on specific functions such as procurement or logistics. You can also consider a broader, more integrated supply chain management solution or an enterprise-wide ERP system that encompasses all organizational functions.

There are many technologies available, and the key is to choose the ones that best align with your goals and objectives. If you want to learn more about the specific types of technologies you might consider for your supply chain modernization efforts, I encourage you to download our digital transformation report. This report offers independent reviews and software rankings, as well as best practices for your supply chain management initiatives. It provides objective and independent reviews of different supply chain technologies, and can serve as a valuable resource as you look to move towards a digital supply chain.

#### Improved Human Performance

After identifying potential technology improvements within our digital supply chain, we must consider the human aspect of our supply chain. Improving the performance of people involved in our supply chain management functions throughout the organization is essential. Organizational change management is critical to ensure that our people understand and embrace the new business processes that will affect them. A clear adoption and change strategy is necessary. People need to know how those processes will affect them, how they will use technologies to do their jobs going forward, and ultimately, what their new roles and responsibilities will be. In supply chain modernization efforts, iob functions can be automated, and we need to figure out how to replace those job functions with something of higher value that will be even more important to the organization. Without this, we not only miss out on the benefits and value of this new technology, but we also cause panic among people because they do not understand what their new job roles and responsibilities will be.

Defining a change strategy and an adoption strategy is essential for digital supply chain efforts. For a deeper understanding of change management and the workstreams that should be considered to improve the human performance of your supply chain, download the guide to organizational change management. This guide covers best practices and lessons for addressing the human side of any transformation, whether it's a supply chain transformation, digital transformation, or ERP initiative. Find the link to the guide below.

#### **Better Data and Visibility**

The next step in implementing a digital supply chain is identifying the analytics and metrics that will be used to drive and manage the supply chain. Data and visibility into the data are crucial for this purpose. It is not just about automating processes with new technology but also about gaining better visibility into the supply chain through that technology.

To ensure the success of a digital supply chain, it's important to have accurate and reliable data. This involves cleaning up the data and loading it into new technologies and managing and preserving it over time to prevent corruption. It's crucial to address the human adoption component of digital supply chains to ensure that people don't unintentionally corrupt or render the data inaccurate. This can lead to bad decision-making and hamper the overall business's growth. Therefore, it's essential to have good data, analytics, reporting, and visibility into the overall supply chain.

## Digital Supply Chain Strategy



These are key components of an effective digital supply chain strategy, but it's important to remember that your strategy should be customized to fit your organization's specific goals and objectives. It's not a one-size-fits-all approach.

These are the decision points that organizations must go through to determine the best fit for their needs. If you are looking to strategize an upcoming transformation or are looking at selecting an ERP system, we would love to give you some insights. Please contact me for more information eric. kimberling@thirdstage-consulting.com

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#### Top 10 Supply Chain in the World

Supply chain management is one of the hottest disciplines in the business world today, and there's a lot we can learn from some of the leading supply chains in the industry. But what are those leading supply chains, and which ones can we learn from?

When we're trying to learn about what makes a supply chain effective and how to navigate supply chain management here in the 2020s, it's helpful to look at some of the leading organizations throughout the world that have built very robust, highly successful, and highly effective supply chains.

So, what we want to do today is provide a top 10 countdown of the top 10 supply chains that you should be familiar with as you look for ways to incorporate those best practices into your supply chain.



Schneider Electric is a very large global conglomerate that provides energy management solutions throughout the world. The reason Schneider is on our top 10 list is because they are in an industry that's very complex. Energy management typically entails a complex supply chain, so that alone is a reason to celebrate the success of Schneider's supply chain. But it's also the fact that they're a global organization. They operate in over 100 countries, and that requires a great amount of discipline as it relates to supply chain management. Another reason why Schneider is on our top 10 list is that they have a program that focuses on driving sustainability and innovation in the supply chain. This extends all the way to their suppliers, and basically, everyone that touches their supply chain is focused on sustainability and innovation. For all these reasons, that's enough to land Schneider at number 10 on our list of top 10 supply chains.

## intel.

Coming in at number nine is Intel. Intel is a chip manufacturer, as you may know, and they produce a very high volume of computer chips every year. The reason why they're in the top 10 is that if you go back 10 years or so, back to 2012, Intel was experiencing a chip shortage. They were actually able to beef up production by building two manufacturing plants in the United States to help increase throughput, productivity, and production at a time when there were pretty severe chip shortages. During that time, they demonstrated that they could respond with their supply chain management and respond to changing macroeconomic and overall supplier trends to ensure that they had a supply chain that could survive into the future.

Not only that, but they also have a very forwardthinking supply chain that focuses on decreasing their carbon footprint and decreasing their impact on the environment. The sustainability of their supply chain is another reason why they're in our top ten. Finally, another neat thing about Intel's supply chain is that they have a corporate code of conduct that applies to all of their suppliers. They have over 9,000 tier 1 suppliers who are required to abide by this code of conduct to ensure corporate responsibility, impact to the climate, as well as overall diversity goals. For these reasons, Intel is number nine on our list of top 10 supply chains.



Coming in at number eight on our list is Alibaba, a global ecommerce retailer similar to Amazon that manages a complex supply chain with many different suppliers and customers worldwide. The fact that they have been able to scale and become a powerhouse internationally is a reflection of their effective supply chain management. In addition to being a retailer and distributor, Alibaba has also increased its manufacturing capabilities, further complicating their supply chain. However, they have managed this transition well and have even offered a supply chain as a service offering to customers, allowing them to track everything from procurement to transportation. For all these reasons, Alibaba is number eight on our list.



Coming in at number seven is Walmart, the global retailer that transformed supply chain management in the 80s and 90s by changing the way people think about it. They drove down supplier costs by integrating their supply chain and providing innovation that other organizations had not seen before. More recently, Walmart has navigated the pandemic and the shift to omnichannel retail by enabling competencies that allow for curbside pickup, rethinking the way people shop and get their goods. They also have a strong focus on sustainability and corporate responsibility. For all these reasons, Walmart is number seven on our list.

### 6 Johnson-Johnson

Coming in at number six is Johnson & Johnson, the large consumer product organization. The reason they're on our top ten list is that they've really pioneered this whole concept of data-driven supply chains. They're almost obsessed with data analytics and gathering data throughout the supply chain. They use these various data points throughout the supply chain to create more accurate forecasts of consumer demand, as well as production and distribution needs. They really identify potential challenges and bottlenecks within the supply chain. This is a very innovative way of thinking that we hadn't seen up until Johnson & Johnson, and that's why they're number six on our list.



Coming in at number five on our list is Colgate Palmolive, another consumer product powerhouse. The reason they're on our top ten list is that, first of all, they manage a very complex supply chain effectively throughout the world. But secondly, they're also very innovative in terms of some of the digital technologies they use to manage their supply chain. For example, the company has pioneered factory automation as well as advanced network modeling, which are two technologies that hadn't been used previously, or at least not commonly used by supply chains. In addition, the company has deployed predictive maintenance models using that same data, as well as wireless sensors and artificial intelligence. They're really on the leading edge of using some emerging technologies to enhance and optimize our supply chain, which is why it's number five on our list of top ten supply chains.

## 4 McDonald's

Coming in at number four on our list of top 10 supply chains is McDonald's. The reason they're in our top 10 list is that they've used technology in a way that a lot of organizations haven't done well. Not only that, but they've integrated a supply chain that begins with farmers and the actual production of raw materials and ingredients into their food all the way through to the final product that's delivered to their customers in the restaurants, and of course, everything in between. So, that alone is a very complex supply chain. It's a very large and global supply chain, and for that reason, McDonald's is number four on our top ten list of supply chains.



Coming in at number three is Unilever. Unilever is interesting because they view supply chain management as a core competency and a competitive differentiator for their organization. Unilever's supply chain begins at the manufacturing process and continues all the way through to end consumers. It's heavily dependent on data, artificial intelligence, and other ways of anticipating consumer demand and producing and delivering to that consumer demand. If you just look at the sheer volume, complexity, and magnitude of their supply chain, it's very impressive. The company manufactures and distributes 77,000 stock-keeping units or SKUs in over 190 countries, and they serve 2.5 billion customers every day, which is about a third of the world's population. For all these reasons, Unilever is number three on our list of top 10 supply chains.



Coming in at number two on our list is Apple, one of the largest companies in the world. They produce complex products and distribute them globally. When you look at their iPhones, laptops, and other devices, there are thousands of materials that go into each product, making it a challenge to manage. However, they have created a nimble and adaptable supply chain by establishing strong relationships with suppliers, allowing them to respond quickly to changing customer demands. They have been able to ramp up production when there is a surge in demand, which is why they are number two on our list.



Coming in at number one is Amazon, which may have the most complex supply chain in the world. They work with thousands of suppliers and sellers through their e-commerce platform, produce many of their products, and are opening their brick-andmortar stores. They manage their entire distribution chain from the supplier source to their distribution centers and delivery to customers. Amazon has revolutionized the industry by offering same-day delivery, a feat that was unheard of a few years ago. They have forced the industry to rethink supply chains, and for this reason, they are number one on our list.

I hope this overview has given you a good idea of the top 10 supply chains in the market.

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## **Emerging Tech in Supply Chain Management**



echnology is completely transforming the way a Supply Chain Management works today but what exactly is this emerging tech that we should be aware of in supply chans? Much of the work we do with our client base involves Supply Chain Management. When we're helping clients through Digital Transformations, oftentimes, the core of what they're changing is their supply chain and as we've seen over the years, technology is changing very quickly, there's a lot of new emerging technologies and supply chains are changing quite a bit as well. What we want to do today is talk about the emerging technology that you should be most aware of and cognizant of as you think about potential supply chain and or digital transformations

#### Supply Chain Management Software

The most established and most mature of the emerging technology that I'm going to talk about here today is Supply Chain Management software. There's a number of Supply Chain Management software vendors like Blue Yonder and Manhattan Associates that provide Supply Chain Solutions that are focused on just supply chains. This includes everything from warehouse management to logistics to procurement and other parts of the supply chain.

You have these established Supply Chain Management vendors that are one option but you also have other supply chain vendors that provide more targeted solutions within Supply Chain Management. For example, you have standalone warehouse management solutions, you have stand-alone transportation management system, standalone procurement systems, standalone shipping, all types of different technologies that can really go deep into one part of your supply chain. One of the more fun fundamental technologies that supply chain managers use to transform their supply chains are these off-the-shelf Supply Chain Management solutions.

#### Robotics

Robotics have been around for a long time but they're just now really starting to gain traction in Supply Chain Management. Robotics are a way to automate some of the manual labor and some of the error-prone processes that were historically driven by humans. Think about all the different touch points that a raw material or finished good has throughout a supply chain. Beginning with the manufacturing of the product, you have robotics that can automate the manufacturing process when the finished products or the raw materials are in the warehouse, you have robotics that can automatically manage the pick, pack, and ship processes. Those are just a couple examples of how robotics is changing the way supply chain managers manage the overall supply chain.

It's not just robotics themselves that are the game changers, they're creating more efficiencies and more consistency and predictability and scale than humans can, but robotics also have the advantage of capturing data in the supply chain. Robotics are not just a way to automate manual processes, they're also a way to capture data that we typically hadn't had before robotics in our supply chains.

When we look at all the steps that happen in a process within Supply Chain Management, you have a lot of data that's being captured, there's a lot of touch points there and it's hard to track where exactly a raw material or finished good is and that's where internet of things can be extremely valuable because now we have devices throughout the supply chain that are capturing data. This allows real-time visibility in ways we didn't before.

For example, we talked about robotics a minute ago and how robotics has the ability to capture information about the status of raw materials and finished goods, whether it's in a warehouse or on a shop floor, you also have other devices and other data points throughout the supply chain. You have trucks that can be monitored with devices, you have handheld devices that might be used to track inventory and track the status of different supply chain activities. So, we have hordes of data that are being captured but now we have to figure out what do we do with that data and that's where Internet of Things comes into play. Internet of Things is a way to consolidate data and to get and to give us better visibility and integration of that data throughout a supply chain.

## Interoperability and Integration Tech

With all these different technologies we've talked about so far, there's the risk that we have siloed technology that doesn't integrate and in order for internet of things to work and some of the benefits of Internet of Things, we need to have integration between these different systems. We might have devices out in the field capturing data, we might have multiple systems managing different parts of our business but ultimately, we need to figure out how to tie this all together so that we have a centralized dashboard and centralized visibility into what's happening in our supply chain.

This is where interoperability in integration technology comes into play. We need to have that

core platform that ties together these different technologies. Some examples of interoperability, types of technologies would be vendors such as Palantir or Snowflake, those are two vendors that really tie together and consolidate data from multiple sources and give you unique insights and workflows based on those integration points. We need to think about interoperability in integration technologies in addition to some of the other technologies we have talked about when it comes to managing our supply chains.

#### **Artificial Intelligence**

With all these different systems and the integration of systems and data, now we have the ability to really think about how we can make use of that data in ways that we haven't been able to in the past. That's where artificial intelligence comes into play. With the complexity of today's supply chains, not just in terms of the systems and technologies we've talked about but just Global Supply Chains in general, they're very complex, a lot of moving parts and a lot of different geographies we're operating in.

You have macroeconomic trends that can affect your supply chain, you have geopolitical and weather related events that can affect a supply chain and so on. There's many factors we have to manage, understand, anticipate and mitigate the risk for and artificial intelligence can be a great way to do this. Artificial intelligence allows us to take all the data that we're capturing throughout the supply chain and now start to learn from that data and start to predict and analyze what might happen in the future so that we as humans, can take some of those different scenarios and take some of the outputs from artificial intelligence and really have better understanding of where the risks are and where the opportunities are to optimize our supply chains. Artificial intelligence is an emerging tech that will completely transform supply chains now and in the future.

#### Blockchain

The last emerging tech and supply chain management that I'll talk about here today is blockchain. Blockchain has been around for a while and most of you may think of cryptocurrency when you think about blockchain and it certainly is an underlying technology for cryptocurrency but blockchain also has a lot of practical use cases within Supply Chain management.

Blockchain can allow us to track each step in the process and sort of provide a unique stamp and understanding of where the steps have been, where the breakdowns have been and really understand everything that happened from the initial start of the supply chain until the product reaches the end customer. Blockchain is a very secure way and a very unique way that supply chain managers can start to get a better handle on where things are within the supply chain.

It is also particularly important and particularly opportunistic when it comes to highly regulated sorts of supply chains. If you're a food or beverage manufacturer for example, blockchain technology is a great way to provide traceability in case there's a recall, so you can trace back to what the raw material problem area was. If you're contracting or providing goods or services to government entities, you need to have a very secure way of tracking how that product was made and where the product was made that's another way the blockchain can help. Blockchain technology is another game changer potentially for supply chains now and in the future. I hope this has provided you some insights and understanding of what some of those emerging technologies are in Supply Chain Management.

If you are looking to strategize an upcoming transformation or are looking at selecting an ERP system, we would love to give you some insights. Please contact me for more information eric. kimberling@thirdstage-consulting.com

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### Supply Chain Management in 2030: Future Trends, Changes, and Predictions



Supply chains of the 2020s look a lot different than they have in the past and they're going to look a lot different in the future. What we want to do today is talk about the future of supply chain management as we know it today.

Supply Chain Management has been rocked over the last few years since the pandemic. It's exposed a lot of bottlenecks and disruptions and it's really proven that supply chains of the past are no longer going to be suitable for the needs of the future. What we want to do today is talk about the five major trends that you should be aware of as you navigate the world of supply chain management in the 2020s and beyond.

#### **Rethinking Suppliers Strategies**

One thing that the pandemic of 2020 and some of the geopolitical uncertainties of the 2020s have taught us is that supplier strategies of the past are no longer going to work now or in the future. If you look at what happened during the pandemic for example, we saw that we had an over dependence on certain parts of the world that were no longer as reliable as they had been in the past because of shutdowns and other pandemic related issues and geopolitical issues.

What that has done is, it's forced organizations to rethink their supplier strategies and really focus on diversifying the concentration of risk within their supply chain networks and their supplier networks in particular. For example, many organizations found that they were procuring raw materials and parts and products from China or in Asia Pacific and when the pandemic hit China and Asia Pacific, those regions had a lot more stringent lock downs than other parts of the world and what that did is it disrupted the supply chain. We were so dependent on a small handful of countries that now suddenly weren't dependable due to factors outside of our control and so what that's doing is it's forcing organizations to think about how they can diversify supplier risk, not just geographically but also looking at a variety of suppliers and making sure that they don't have too much concentrated risk on any one or more suppliers.

This is not only for where you procure materials from but it's also looking at transportation or logistics. For example, do we have too much risk riding on one transportation or Logistics provider or one 3PL provider and do we need to rethink our strategies for how we leverage some of these providers? Those are all questions that we didn't really have to ask prior to 2020 because supply chains were a lot more predictable and a lot more stable than they are now, so in order to navigate the 2020s and beyond, organizations now are being forced to rethink their supplier network and to re-prioritize and diversify their supplier networks as well.

Given the fact that the world seems to be changing at an accelerated pace here in the 2020s is the fact that now we've got to also look at all the data that we have throughout our supply chain, both internally and externally, and we have to figure out how we can use that data to make better decisions and to better anticipate future trends and things that might disrupt our supply chains.

#### **Big Data and Systems**

So when you think about a supply chain and all the complex business processes and different touch points that happen from the time a raw material is produced, until the finished product is produced and it's ultimately distributed to your end customers, there's a lot that can go wrong. There's a lot of different data points that are being captured along the way and organizations that are prepared for the future have ways of tying together their systems and their data to track that information and to make better use of that information so that they can anticipate demand and be more proactive about fixing some of the challenges that organizations are facing with their supply chains today.

It's not just our internal supply chain that we need to be focusing on gathering data from, it's also looking at economic and external factors so things like economic growth, economic shrinkage, recessions in different parts of the world, geopolitical dynamics, the insolvency of certain suppliers or logistics providers, those are all things that you need to have data points that can inform your supply chain managers to make better decisions.

The only way to do that is to have the right technologies that integrate with other providers that can provide both that internal and external knowledge to help you make better decisions and help you manage your supply chain better.

#### **Career Opportunities**

Along with all this disruption and change comes opportunity. Anytime there's disruption and change in the world it creates opportunities for new career fields, it increases popularity of certain career fields and that's the case with Supply Chain Management. Supply Chain Management is a very hot area to be in right now especially if you can combine a knowledge of supply chain management with a knowledge of technology and data. Combining business and technology skill sets and backgrounds is a very powerful combination and people that understand how to manage supply chains, how to improve supply chains, how to do business process improvement, deploy new technologies to make their supply chains better, those people are going to be in really high demand for years to come.

This is something that isn't just a temporary problem or opportunity, this is something that's going to continue for decades as organizations really try to continue this migration to the new post-2020 Supply Chain Management world. Despite all the turmoil and all the problems that we have talked about as it relates to Supply Chain Management, it inevitably leads to more opportunity and potential growth when it comes to your career.

#### **Increasing Regulations**

Another trend to be aware of is that in the not too distant future, governments throughout the world are going to start to regulate supply chains more intensively. When you think about mission critical or essential items, things like baby food or energy or food in general, those are examples of really critical items that people need and when supply chains are getting disrupted to the point where people can't get food, they can't get energy, they can't get shelter, that's when government tends to step in and regulate.

Whether or not you think that's a good thing or a bad thing, the reality is, is that governments throughout the world are going to start to clamp down on supply chains and do their part or try to do their part on regulating and putting in standards and service level agreements for what constitutes an acceptable supply chain, especially in critical areas like food & beverage and energy. One of the things you can do to get ahead of potential government regulation is to fix your supply chain, to improve business processes, to provide better data, to put better systems in place, it's something that's going to help your business anyway and help you be more profitable but it's also getting ahead of potential regulation which may force you to make these changes in a shorter amount of time than if you were to start now.

#### **Cash Flow Implications**

Now, in the relatively short amount of time we've had since the pandemic happened in 2020, we've seen that organizations have responded to the supply chain disruptions by stockpiling inventory. They're going back to an old model that worked decades ago that we moved away from in the 90s and early 2000s, specifically when we moved to more of a just-in-time inventory management approach and that's been a trend that had been developing for decades.

Now we're seeing that that just-in-time inventory management approach isn't as effective in times of turbulence and unpredictability within supply chains, so organizations are responding by letting the pendulum swing back the other way now to where we're stockpiling inventory making sure we have enough inventory on hand.

That's creating a few different problems, one of which is the fact that now it's getting harder to match inventory to demand because we're stockpiling. Organizations are either over stocking inventory that they're not going to need or that's wasted inventory or they're underestimating customer demand and they're still not able to meet demand. That's one problem. One of the bigger challenges that organizations are having is the fact that the stockpile of inventory is causing organizations to have more cash and capital tied up in their supply chains. In the past, they had a certain amount of cash tied up in the supply chain but now they're having to increase that reserve because they've got to stockpile inventory, they have to place orders earlier, they might have to pay for products earlier before they receive those products and it's going to take longer for them to receive those products. Everything's getting elongated, which means more cash is going into supply chains.

Eventually organizations and CFO's of organizations are going to clamp down on these areas of concern. They're going to try to tighten up the cash flow and the capital investments that they've made within their supply chains and that's going to create a conflict or a potential tension between cash flow management and adequately satisfying customer demand. Look for that trend to be something that doesn't get settled anytime soon.

#### **Technology Options**

One of the best ways to navigate some of the challenges we have talked about here in the Supply Chain Management space, is to deploy supply chain systems that can help you manage these realities more carefully. There's a lot of really good supply chain management focus systems out there that help automate and integrate the entire supply chain from procurement, all the way through manufacturing production, warehouse management and ultimately distribution to your customers.

These supply chain management systems can be very effective and very focused on solving the immediate problems that supply chain managers face. You also have enterprise resource planning systems or ERP systems software like SAP, Oracle and Microsoft Dynamics 365, these big ERP systems that do supply chain management. They also integrate with Financials, customer service, sales and HR.

Finally, another useful technology in today's day and age and in the future of Supply Chain Management is going to be business intelligence. Having business intelligence and analytical tools that allow you to take all that data that we mentioned and allow you to provide better insights and understanding into what's happening in your supply chain and allows you to address and mitigate potential supply chain disruptions in bottlenecks so for more information on some of these potential technology options more proactively.

If you are looking to strategize an upcoming transformation or are looking at selecting an ERP system, we would love to give you some insights. Please contact me for more information eric. kimberling@thirdstage-consulting.com

Be sure to download the newly released 2023 Digital Transformation Report to garner additional industry insight and project best practices.

### Best Supply Chain Management Consulting and Industry Careers



Supply chain management is an ever-changing field that can take professionals in many directions as trends develop and change. This means that those with the right skills and experience can find themselves in high demand in one of the hottest, versatile, and adaptable career tracks.

On a daily basis, we're helping clients improve their supply chain, and use better processes, technologies, organizational structures, and strategies to leverage a better supply chain for the future. One of the things we commonly get asked is, how do I move into supply chain management?

While there are different paths you could potentially go down, we've slated the top 5 supply chain management careers that are worth exploring.

#### Top 5 Careers in Supply Chain Management

#### **Technology Consulting**

This area is always in high demand. Technology consulting is focused on helping organizations figure out how they can automate and improve their supply chain processes and technologies. In this role, you assist clients in selecting and implementing different types of supply chain technologies that can help them improve their businesses.

This includes applications such as supply chain management systems, warehouse management systems, procurement systems, logistics or transportation management systems, and other niche-focused technologies and applications within supply chain management. You may focus on one technology and become an expert in a specific software within one specific niche, or you may learn about different technologies and provide more of a general consulting service.

#### **Business Process Consulting**

This area is similar to technology consulting but focused on business processes. In fact, it is recommended to have knowledge in both areas. In order to be a good business process consultant, you need to understand how the different technologies benefit the business.

The role is focused on helping identify how organizations can improve and streamline their supply chain, manage their vendors in a more effective manner, re-engineer their supply chain to provide better visibility, remove bottlenecks, improve efficiency, and allow the organization to scale for growth. Experts in business processes are oftentimes certificated in methodologies such as six sigma or lean six sigma.

#### **Organizational Change Management**

This is an important role within supply chain management as supply chains have gone through significant changes in recent years, causing a higher demand for people that can help enable the human side of change. This comes through supporting employees as they adapt to the changes that come with the evolution of the supply chain.

This could mean training people on new technologies, redesigning people's roles and responsibilities within a supply chain function or looking at how to integrate a supply chain across an end-to-end business, among other things. The organizational change management expert is also a key enabler of the first two roles we discussed.

#### Architecture and Data Consulting

If you're more of a technical-minded person, you can focus on the system architecture and data side of supply chain management. The architect looks after how systems tie together in particular supply chain management systems and how to use data as a competitive advantage within supply chains. Those with a background in data science are a good fit for this role, and they tend to be compensated very well for their expertise.

#### **Project Management**

If you've worked as a project manager in other disciplines, you understand the complexity that can come with leading a team through the details of the bigger picture task at hand. You understand how programs tie together and can resource them, and know how to manage budgets and activities throughout a project plan, that's all transferable to supply chain management.

In addition, project management is a central aspect of any successful digital transformation or change initiative. Whether it's leading a business transformation, organizational change, restructuring, or M&A integration, project management is essential to making any initiative successful. With the right skill set, a career in supply chain management can be very rewarding. As globalization and technology continue to change the way businesses operate, the demand for supply chain professionals is expected to keep growing – especially for those who keep their options open.

At Third Stage Consulting, we're hire new consultants regularly that understand and are interested in supply chain management. If you're interested in exploring a career with us, email us at work@thirdstageconsulting.com and submit your resume. We would be happy to evaluate it and see if you might be a good fit.

### How to Lead a Supply Chain Management Transformation



Supply chain transformations and technology initiatives are always complex. There's a lot of moving parts and considerations, especially during our current supply chain crisis. In today's global environment, supply chain transformation has been thrown a big curveball.

#### **The Crisis**

The US as with the likes of other countries is going through a supply chain crisis along with dealing with the effects of an ongoing global pandemic. We've closed businesses and slowly have cut back on the shipping and handling of products that keep our world running. A lot of us are still working from home. Some kids are back in school, but things are different, and businesses are not operating in full capacity as normal.

There's also obviously an important health crisis unfolding in real-time, which is creating significant economic implications. This perfect storm of challenges is ultimately affecting how organizations are dealing with their supply chains. A majority of organizations and many of our current clients are experiencing extreme supply chain disruptions.

In the best case, for some organizations, they're seeing huge spikes because they are selling products that are in high demand right now. Consumer staples, any kind of food and beverage type of product are a hot commodity.

We're seeing organizations like the government, military, medical devices, and healthcare preparing for additional growth and demand. These are examples of industries where the supply chains are strained and they're struggling to figure out how to deal with this sort of demand. On the other side of the equation, you have companies who have the opposite problem. Their supply chain activity has completely dropped, and demand is down. If they're in retail, distribution, or some sort of luxury / non-essential type product, those businesses are falling very quickly.

Unfortunately, there is no "normal" right now. Most organizations are experiencing one of these two scenarios.

## So, how do you navigate a stressed supply chain?

Here are some questions I want you to keep in mind before we learn how to lead a supply chain management transformation in the right way.

- 1. What does this mean for the world in general?
- 2. What does it mean for our supply chain transformations, and how can we leverage business, technology, and people to focus on improving those supply chains to prepare for this new reality that we're in?

## **Evaluate Your Current Processes and Systems**

One of the first things that we advise clients on, especially now, is to make sure that you're not leading with technology. This is a reality is for a lot of organizations - they don't have the resources to handle that sort of initiative right now. It's essentially because they're so busy and their supply chains are strained. Businesses have fallen off and capital spending is getting stressed, which in turn, budgets are getting cut. Whichever side of the equation you're on, chances are a new technology initiative is going to be the high-cost, high-risk option.

We typically will recommend clients look at their current state and optimize these processes or business functions first. That's going to be the low cost, low value, and quickest ROI that we can typically get.

A lot of "industry types" will lead with silver bullet systems and suggest that you need new technology in order to survive supply chain trauma. That's simply just not where a lot of us are right now. The supply chain turmoil coupled with labor shortages is plenty to focus on without another risk generator like a technology implementation.

Typically, we find that companies, even in good times and bad, are amazed at how much value they can get out of their current environment. It may not get them all the way to where they want to be longer-term, but in the short to intermediate-term, you can get a tremendous amount of value just by looking at simple process improvements, leveraging current technologies, and people.

#### Optimization

Once we've completed the evaluation of current processes and systems, now we look to discover how we can potentially fix them. I understand that It's not always ideal to live with what you've got. For some of you, it's not an option and you may still need to go down the path of leveraging new technology.

For most of you, I would suspect there's a lot of value in optimizing your current processes, especially if capital spending is being put on hold due to supply chain pain. Whatever the case may be, there's no reason to stop and do nothing. There's a lot we can do to live with what we have and get more value out of it.

The good news is this will better prepare us for when we are ready to start deploying bigger transformation initiatives.

Some examples are to analyze business processes and understand where they're potentially broken. Where the strains are, and what we can be doing to improve the processes even without new technologies.

Let's say that one of the challenges you're having as an organization is predicting demand. Fulfillment is a pain point as you don't understand demand. It's important to dive into those processes and really dissect what's happening.

Some things to keep a note of is:

- How are we forecasting demand?
- What inputs are we dependent on?
- Where are those inputs coming from?
- Why are we having trouble getting those inputs?
- Why are those inputs inaccurate?
- Why are the outputs inaccurate?

If we look at dissecting these processes step-bystep deep within the system, a lot of times we find that there are simple problems behind this. It could be because of some of the inputs upstream in the process, employees not entering the data the way they should be, or maybe that employee is tracking information in a spreadsheet instead of an enterprise system. This is an extremely valuable and a great way to optimize current systems to stronger business processes and reestablish organizational roles in your company. It will not only help us now in the short term but in the longer term as well.

In the end, when it does come time for a bigger transformation on the supply chain side, we'll have a better blueprint and a stronger foundation already established.

#### **Define Your Future State**

Another current state influence an organization has is to identify future state business processes and clear enterprise strategies. On the surface, that sounds like a no-brainer, however, the big difference here is that we really must take a step back and come at this from the angle of what we thought was our future state once was, may not be what it is going to be.

We must now come to terms that we are living in a new normal. The global economy is headed in a different direction. Though I can't predict the exact future, there are going to be massive changes in the way that businesses operate and the way that supply chains function as a result of our current business landscape.

Having a clear and relevant future state vision will allow organizations to identify valuable process changes and enhancements.

#### Diversification of Partner Network

Another internal controllable that companies can activate immediately is to diversify the vendor base. A lot of enterprises that we're working with, and even a lot you might read about in the media, such as Apple and other big companies with global supply chains are working to figure out how to expand vendor and supplier partner networks so they're not overly dependent on one region of the world or a specific vendor.

Whether it's because we have a single supplier, a single vendor for a certain component of our product, or because it's in a certain country that's subject to economic changes, there's always a chance the government regulatory changes could disrupt our supply chain. This is just one example of how we want to look at our future state in a way that we hadn't may be thought of in the past.

We can view these current challenges as an opportunity to take a step back and really rethink how we've built our supply chains and make sure that we're optimizing our current supply chain for that environment. We don't necessarily anticipate that this supply chain roller coaster is going to become the norm, but it's critical for businesses to have a strategy regarding uncertainty.

#### **Supply Chain Innovation**

How can we build a supply chain that is built by fluctuation and other Black Swan types of events that could lead us to the massive disruption to our supply chain?

We craft a supply chain built on innovation.

Leveraging assets such as data, predictive analytics, forecasting, automation, machine learning, and Al, or any sort of way to anticipate future demand. Like I said before, I don't think anyone could have really predicted the sorts of peak and valley that we're seeing in certain supply chains because of the global situation, but it opens our eyes to a reality that stuff like that does happen. There are things that we're missing. There are blind spots we seem to have as a human race and as a business population that we couldn't have predicted and didn't predict, in terms of how it's going to affect our supply chain.

All of this can apply to our warehouses as well. In our actual distribution or the last point of contact before distribution.

How can we make sure we have better warehouse management or ensure that warehouses are operating at optimal levels?

Do we have the right people, technology, and processes in place to help us manage any sorts of increases or decreases in our supply chains in the future?

#### **Targeted Technologies**

Looking ahead, I suspect that the days of big, massive technology initiatives and spending are on the back burner for a while. I don't know how long, but I think for some period, we're not going to see these massive supply chain transformations where we automate everything from procurement, warehouses, logistics, distribution, shipping, etc.

It's going to become more of a situation where we leverage technology on a select and targeted basis. New technologies on a spot strategic basis is going to be important. I think that's what we'll see a lot more companies do.

Instead of focusing on a large tech spend, it's more important for us as organizations and as teams to use our expertise, to be more focused and strategic in how we use technology to improve our supply chains.

#### Key Takeaways

To wrap up, supply chains as we know are dead. They're changing right in front of our eyes and they're going to look a lot different in the future. Now is a good opportunity for us to rebuild, make our supply chains healthier, leverage people, processes, and technology.

## Top 10 Supply Chain Management Systems (SCM)



#### Our criteria for ranking the top SCM systems

Our independent comparison of the leading SCM systems consider a number of factors. We evaluated our experience helping clients select and implement the systems, product innovation, flexibility, and overall product roadmap.

In addition, we evaluated a number of functional criteria that are critical to global supply chains, such as:

- Supplier collaboration
- Quality management
- Recalls
- Complex supply chain
- Anticipate customer demand / procurement
- Lean processes / inventory
- Yard management

The evaluation also considers average cost, risk, and benefits, along with both quantitative and qualitative factors.



Oracle NetSuite is a common go-to supply chain and ERP system for small to mid-sized organizations – especially those with relatively vanilla and less complex business requirements. Unlike other SCM and ERP systems that have just recently migrated to the cloud, it is a mature SaaS ERP system that was built in the cloud. The product also provides a full-blown ERP solution even outside of supply chain management, as well as a large customer install base and the resources of software giant Oracle.



Microsoft is another mid-market favorite among those with relatively simple supply chain processes and needs. It is one of the top ERP systems with the familiar Microsoft look and feel. It is a flexible product that integrates relatively well with thirdparty systems, but it has its weaknesses as well. It may not be able to help manage your entire supply chain, as it struggles to meet more complex supply chain needs and its network of resellers and implementation partners is a mess. That said, it can be a good fit for many small scale organizations.



Plex Systems was one of the first SaaS ERP systems to focus on two of the most imperative business processes, namely - supply chain and manufacturing capabilities. It is particularly strong among companies with complex supply chain planning, such as those in the aerospace and automotive industries. It is fast catching up on the retail and distribution space as well. It is a mature cloud SCM solution, but one without a lot of supporting implementation partners.



In some ways, SAP S/4HANA is the gold standard of ERP and SCM systems for large, multi-national organizations. It is big, complex, and robust, which can be a good thing or a bad thing depending on your needs. It handles full ERP functionality such as financials, inventory management, and CRM, while the addition of Ariba strengthens capabilities within procure-to-pay processes. The HANA platform provides speed and real-time visibility, but the functional maturity of the product is weak relative to its legacy ECC and R/3 products.



IFS is another Supply Chain Management Software with full ERP capabilities. IFS is particularly adept at handling geographically dispersed supply chains, such as those involving field service crews in the utilities industry. Unlike many SCM providers, IFS offers multiple deployment options including cloud, on premise, and hybrid options. The biggest downsides? The company isn't as well-known as some of the others and its network of implementation partners is relatively weak compared to others in the top 10.

## 5 FighJump

HighJump, which was recently acquired by the software giant Korber, is another viable Supply Chain Management System in the small business to mid-market space. It is particularly strong in warehouse management and retail distribution, while sister solutions within the Korber network can handle more complex shipping, vessel, and port scheduling needs. The biggest downside is that we have found it to be relatively expensive and less robust than some of its competitors.

## 🕢 💠 BlueYonder

Unlike many of the bigger ERP systems in the top 10, Blue Yonder (formerly JDA) has a narrow and deep focus on SCM. Its relative functional strengths are in sales and operations planning, retail, and workforce management. In addition, it has extended functionality to address manufacturing and shop floor planning, which is often used by companies in the food, beverage, and pharmaceutical industries. The downside is that it cannot address some of the broader functionality that some of its ERP counterparts can.



Of the "big" ERP and SCM systems, Oracle ERP / SCM Cloud is the more flexible of the bunch. Its strengths within SCM are stronger than ERP competitors such as SAP S/4HANA and Microsoft D365, while its cloud SCM offering is a big more mature than S/4HANA, D365, and some of the others in the top 10. Oracle is particularly strong in analytics and business intelligence, which many CFOs tend to gravitate toward.

## 2 infor

Infor CloudSuite – along with its Nexus counterpart – can be a great supply chain and enterprise-wide offering for those looking for a more complete manufacturing, distribution, or back-office solution. The product suite allows for multi-party collaboration, along with innovative functions such as its control center, predictive analytics, and working capital management. Infor's recent acquisition by Koch is another strength, which gives the company R&D resources to continue innovation in the SCM space.



The top spot belongs to a product from a big company that is hyper-focused on providing deep SCM capabilities. Manhattan Associates tends to fit particularly well with grocery, food, beverage, retail, and omnichannel companies. It is also strong in logistics and transportation, making it a good option for retail and distribution companies.

It is built on the .NET platform, making it easier to integrate with SAP S/4HANA, Microsoft D365, and other back-office ERP systems. The product's biggest downside is that virtually all implementations run through Manhattan's professional services arm, which can limit implementation options and resource availability for its customers.

#### Key Takeaways

While this top 10 list is based on the average needs of a variety of companies, your specific needs and priorities may result in a different ranking. The two biggest factors that will influence your prioritization of these systems will be:

- Your focus on distribution versus supply-side procurement and manufacturing, and
- Your requirements for focused SCM needs versus broader, enterprise-wide ERP needs
- Your need for 360° Supply Chain Visibility

Regardless of your needs, the above systems are some of those we recommend as part of your shortlist of options to help navigate your supply chain navigate the challenges of tomorrow.

### Top 10 Supply Chain Buzzword Terms and Definitions



S upply chain management has recently become a mainstream buzzword with celebrities, world leaders, and a variety of digital media influencers or thought leaders referencing our current global supply chain crisis.

Though pretty much every single consumer has experienced some layer of the supply chain disruptions, the average person still might not grasp how critical a supply chain is to an organization.

In order to truly understand its influence in the marketplace, we need to unpack those terms and definitions that affect the process and make these new cool-factor buzzwords more approachable.

Let's take a closer look at some main terms that make up a supply chain.

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- Supplier Management
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- Freight and Transportation
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#### 1. Procurement

Procurement is one of the first important terms to understand when you think about supply chains. In essence, it is the way that you purchase or acquire raw materials and other things that you need to run your organization. There are really two major types of procurement. You have direct and indirect procurement.

Direct Procurement: The acquisition of raw materials that are going to be used in producing your finished product. It could also be the procurement of semi-finished goods or any sort of work in progress that you're going to finish the assembly on within your own operations. It is whatever your product of services or anything that's related directly to the production.

Indirect Procurement: Is when you acquire things like office supplies, something that's not going to be critical or directly related to your end good or material, but it is something that's essential to running your business.

#### 2. Supplier Management

Another important concept with supply chain management is supplier management. Procurement is related to what you buy from suppliers or vendors. This whole concept of managing your supplier base, understanding who your suppliers are, and who your vendors are, is extremely important. Especially for more complex supply chains that have hundreds or thousands of different parts or raw materials that go into a finished good.

When you think about supplier management, there's a few different dimensions. One important one is understanding who the suppliers are for all the different raw materials and components you might be using for your product. Each raw material that you acquire or procure in your processes might have multiple vendors, which leads me to another important dimension of supplier management. Organizations can proactively hedge risk of having any sort of disruption within the supply chain by diversifying your vendor network. This whole supplier management concept is full focused on ensuring you know who your vendors are for all your different raw materials and components, and also what their quality and cost ratings are.

#### 3. Inventory Management

Now, procuring raw materials and products from vendors and suppliers are just one part of the process. Once you have procured the products, then you have to figure out what you're going to do to manage that inventory. Whether it's raw material, finished goods, or indirect procurement, it's critical to track and manage your inventory. Simply put its understanding what materials you have, where they are, and when you might need to order more.

Inventory management also has to do with your warehouse and how you manage where you place and store materials within your warehouse. In general, inventory management is focused on what products do you have, what's your inventory level, where the material is located when you need it, and ultimately, how are you going to get it to your end customer? These are important to think about when it comes to supply chain management.

#### 4. EDI

To communicate with vendors and suppliers, and even customers, organizations will typically use something called EDI or electronic data interface. Essentially this is an electronic way to communicate with your vendors and suppliers and your customers. If your customer places an order with you, they may place that order through EDI. When you place your order with your suppliers, you may be placing that order via EDI as well. Most organizations have moved to this EDI model, or they use EDI tools as part of their core enterprise technology. This whole concept of EDI is an important way to manage and communicate with different players throughout your supply chain.

#### 5. Freight and Transportation

Moving your products, whether it's your raw materials or your end products, throughout the entire supply chain is a very important part of your overall supply chain management function. When you think about where you order your raw materials from, it's a matter of understanding how your raw materials are going to get from the manufacturer or the producer to your facilities.

An organization needs to have visibility and awareness from the time a raw material order is placed, shipment from the vendor supplier, then ultimately how it gets to the warehouse.

Next, how you are going to get the finished good to your customer? Whether it be through trucks or maybe you're going to ship it out through another port to a different distributor. You want to make sure you completely comprehend how things are moving throughout your supply chain. This whole concept of freight and transportation is a critical part and an essential component of any supply chain management function.

#### 6. Logistics Management

There are a variety of items and processes floating through a supply chain at any given time. Interpreting these various touchpoints is oftentimes referred to as logistics management.

Organizations will have specific departments or functions focused on logistics management. They're the ones that ensure that they are managing the whole process of shipments. Overseeing that entire process from the time the product leaves your supplier's warehouse until it gets on the container, is another important factor in the supply chain. That whole process must be managed via logistics management.

It's a very complex function, especially if you're dealing with multiple countries and multiple ports. You have things like tariffs and customs to deal along with all those different international trade sorts of dynamics are an important part of logistics management. Organizations will use technologies like enterprise resource management, ERP systems, or supply chain management systems to help manage some of this logistics management.

#### 7. Warehouse Management

Once you get your raw materials into your warehouse, you then have to figure out how you're going to produce the product, which means you've got to pull those materials back out of your warehouse. This is looking at your warehouse management. This whole concept of producing the product, using materials in your warehouse, putting the finished product back in your warehouse, and then ultimately shipping from the warehouse to your end customer is multifaceted.

This requires a lot of good information, data, systems, and processes to manage it. Warehouse management is the whole function of managing that entire warehouse.

- How you track inventory
- Where inventory is
- How you track inventory levels

When you trigger reorder quantities for any sort of raw material or finished good that might be dropping below a certain minimum threshold you may have defined. The whole pick, pack, and ship process from the time you get a customer order is something that needs to be managed well to get things done on time. You've got to then go find the product in the warehouse, pack it, ship it and get it out the door to your customer.

#### 8. Drop Shipments

In today's age of high customer expectations and the whole affect that Amazon hyper-fast distribution model. Global organizations are under a tremendous amount of pressure to get products produced and shipped as quickly as possible, and ultimately get it to their customers as quickly as possible. Oftentimes this requires that you bypass the traditional warehouse management function.

In other words, it may be that instead of storing items in your warehouse or acquiring a product from a vendor, you might bypass that warehouse management function by using the drop shipment process.

One of the simplest examples or ways to understand this on a basic consumer level is when you think about either Amazon or Alibaba. Oftentimes you're buying from third parties or other people that are outside the Amazon ecosystem of warehouses, and they're going to ship directly from their own warehouse. They're going to produce the product or acquire the product and they're going to ship it directly to you rather than going through Amazon's warehouse before it gets to you. This is a real simple consumer example, but organizations, even in B2B situations, they'll do that same thing. Now, of course, this only works with finished products.

If you're talking about raw materials or semi-finished goods, it's going to have to come to your location most likely to then be produced or finished before it can be shipped out to your customers. In the end, oftentimes drop shipments are a way to speed up the whole supply chain.

#### 9. Backordering

When you're trying to get raw materials, components, or even finished goods within your supply chain, you find that the vendor supplier or suppliers you're dealing with can't get it to you right when you need it. This triggers what is known as a back order. That means that you have back order or a backlog of orders that the vendor needs to catch up on.

One note about back orders is that when you run into situations where a certain vendor is getting backlogs or delays in getting product to you, that's where supplier management becomes so important. Ideally, you would have a backup vendor or another partner that you can fall back on and presumably deliver faster and cheaper than what the other one might be able to at that moment in time.

Supplier management can be a good way to mitigate against the risk of back orders.

#### **10. Landed Cost**

When you're looking at the cost of your overall supply chain and ultimately the cost of your individual products that you're producing for your customers, you want to understand what the total landed costs are. For example, you're outsourcing manufacturing and you're acquiring a product from, let's just say China, and let's just say it's an iPhone. You're going to produce a thousand iPhones from China. It may be that each individual iPhone costs \$100 for you to buy each iPhone from that vendor or that supplier.

When you add on things like freight costs, customs, and other costs that go along with international trade and shipments, it may be that instead of \$100, it's \$130. This concept is known as landed cost. It helps to recognize where you might be able to optimize costs. If your freight costs are high because you're relying on air freight, for example, it may be that you look at shipping via water, which is typically less expensive on a per unit basis.

This is just one example of how you can use this whole concept of landed cost to fully understand your total cost of your supply chain at individual product levels so that you can enhance those costs and ultimately it should affect your pricing as well.

## Resources

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