**Module 1 ASSIGNMENTS**

**1) Describe how purchasing become aware of purchase requirements.**

Purchasing must identify or anticipate needs for material or services that are needed. This is the first step of the purchasing cycle. Normally purchasing requirements are expressed by other departments, and purchasing is then contacted and informed about this need in various ways  
Purchasing requisition

This is an internal document, which a user sends to purchasing, expressing a specific need for material or services. It can be done on paper or electronically via a particular requisition system or even simply by email.

Forecasts or customer orders – those can cause the need for new material.  
Reorder point system – this is a widely used way of determining needs. It is usually an automated computerized system that keeps track of the inventory and informs when stocks are running below a certain threshold.

Stock checks – those involve the physical checking of the inventory, and can result in requests for additional material, if stocks are running low.

EDI system – in a company that internally is running on electronic inventory systems, orders can be placed into this computer system directly by the user – so the information either goes to purchasing to take the necessary steps to buy the material needed, or if a purchasing system is linked directly the sellers system, a user’s request may go there directly, if such agreements are made beforehand and the user has the authority to do so.

Tactical purchasing requires experts familiar with the formal purchasing functions. Whereas for the needs of strategic sourcing companies should also employ true specialists of the production process.

Probably the most appropriate way is to redirect the current employees in the areas of accounting, engineering, quality and product dosing, manufacturing and marketing to the area of strategic souring management and also include strategic planning specialists and procurement employees.

Only they can reach the best technology and quality, the most valued by the customers product on the lowest costs because they will be so well acquainted with every level of the product

Marketing and finance overshadowed purchasing in the period after WW II because companies were concentrated on satisfying consumer demand and the needs of the industrial market. Purchasing was not considered to be important to mainstream problems.

Purchasing grew much more important when companies had to face shortages of materials because of embargoes and other restrictions.

Thus completion became more intense, competing in the global market required new approach.

The rapid technological progress made product's life cycle shorter and using the new technologies of telecommunication was cheaper, faster and more reliable. Therefore price competition was the major factor determining supply contracts.

In general the internal customer is a person within a organization who at any time is depending on someone else within the organization. It means that the internal customer is depending on the work of some other person, without whom he cannot proceed with his own work.

Internal customers of the purchasing department are nearly all other departments of a company, because purchasing is the basic for everything that happens in the organization. For example the production department, which is waiting for raw materials, sales department and logistics?

**2) Describe the challenges organizations face as they attempt to integrate organizational activities into the supply chain?**

We, the customers, are demanding innovative products at the right time and at a reasonable price. This creates challenges for companies since creating both responsive and cost-effective supply chains is critically difficult.

I find these challenges exciting and that’s why I decided to pursue a career in the field. Let me expand on today’s main supply chain challenges.

**Globalization**One of the biggest challenges that companies are facing is how to reduce their supply chain cost. In order to satisfy customers’ price expectations, companies have opted to relocate manufacturing to low cost countries around the world in an effort to reduce direct and indirect costs and to minimize taxes.

But, having global suppliers contributes significantly to complexity that comes from extended delivery lead times. Customers not only want lower prices, but they also want their products on time.

**Customer Preferences**As stated above, global supply chains are complex. Add to that product features that are constantly changing, and the challenge is even greater.

A product is released and customers rapidly pressure companies to come up with the next big thing. Innovation is important since it allows companies to stay competitive in the market, but it’s also a challenge.

To enhance a product, companies have to redesign their supply network and meet market demand in a way that’s transparent for customers.

**Market Growth**Another factor that presents a challenge is the pursuit of new customers. The cost of a developing a product, from R&D to product introduction, is significant.

Therefore, companies are trying to expand their distribution to emerging markets in order to grow revenues and increase market share.

Companies all around the world are expected to expand in their home and foreign markets. The introduction to new markets is difficult due to trading policies, fees, and government policies.

Customers’ expectations nowadays are more demanding than ever. As described here, companies have responded with global networks, product innovation, and market expansions. This means that companies now rely on supply chain managers to optimize their value chains in order to stay competitive.

As such, it’s no surprise that these professionals are in high demand. So customers, rest assured - experts in supply chain management, including our own Grainger Center graduates -  are behind the scenes tackling these complexities each and every day and are eager to delight the customer experience.

**3).Discuss the key enablers of excellence in purchasing and supply chain management.**

1) Human Resources,

2) Organizational Design,

3) Information Technology

4) Measurement.

1) Human Resources refer to a company’s needs to hire qualified individuals through recruitment, job fairs and college talent search that will understand the fundamentals. According to Giunipero, L., and Handfield, R. (as cited in Monczka, 2011)

1): supplier relationship management,

2): total cost analysis,

3): purchasing strategies,

4): supplier analysis and

5) Competitive market analyses”, would be the fundamentals.

With human resources it is also important to have growth and training potential with employees already in the company.

2) Organizational design described by Hamel, G., and Pralahad, C.K. (as cited in Monczka, 2011) is the process of assessing and selecting the structure and formal system of communication, division of labour, coordination, control, authority, and responsibility required to achieve organizational goals and objectives, including supply chain objectives.

Real Time Collaborative Technology Capabilities is the high tech 21 st century way of using information technology to track product, control inventory, and connect manufactures with suppliers.

Using tools like the Internet, GPS, RFID and voice recognition, allows companies should know in real time where the product is located, how long the transportation will take, make cost comparisons in real time, and demand updates.

4) Right Measure and Measurement Systems is measuring performance, data, and the company on the global market.

It has its difficulties due to changing variables to see what the goals of an organization should be and how competition is performing.

It also does provide motivation for suppliers; knowing they are being observed and evaluated, makes them more focused on increasing quality and productivity.

Measurement shows how new implementations are effecting a company and it is one of the best tools to control purchasing and supply chain activities.

CH1 Q11 Briefly discuss each of the seven periods in the evolution of purchasing and supply management.

What do you forecast for the future? Period 1: 1850-1900 Railroad technology made a breakthrough in supplying demand and the history was born, with railroads moving goods on demand.

“By 1866 the Pennsylvania Railroad had given the purchasing function department status, under the title of Supplying Demand” [CITATION Mon11 \p 24 \l 1033] Period 2: 1900-1939 outside of the railroad sector, industrial sectors saw the importance of purchasing.

“Engineering magazines in particular focused attention on the need for qualified purchasing personnel and the development of materials specifications.” The first non-railroad purchasing book was published:

**Excellence in Supply Chain Management**

Supply chain management (SCM) is the management of a network of interconnected [businesses](http://en.wikipedia.org/wiki/Business) involved in the ultimate provision of [product](http://en.wikipedia.org/wiki/Product_%28business%29) and [service](http://en.wikipedia.org/wiki/Service_%28economics%29) packages required by end customers (Harland, 1996)(1). Supply chain management spans all movement and storage of [raw materials](http://en.wikipedia.org/wiki/Raw_material), work-in-process inventory, and finished goods from point of origin to point of consumption. Organizations experienced that they must rely on effective supply chains, or networks to be able to compete in the global market and the networked economy.

In the 21st century, changes in the business environment have contributed to the development of supply chain networks. First, as an outcome of globalization and the proliferation of multinational companies, joint ventures, strategic alliances and business partnerships, significant success factors were identified, complementing the earlier "[Just-In-Time](http://en.wikipedia.org/wiki/Just_In_Time_%28business%29)", "Lean Manufacturing" and "Agile Manufacturing" practices. (2)

Organizations have figured out that to be successful in this proactive business world they need to collaborate with their partners in their supply chain. It is obvious that only this way will bring the excellence in their business.

It is experienced by different organizations that bringing the excellence to the environment will also bring benefits for all parties. However benefits worth some extra initial effort for the enablers and some extra struggle to the barriers of the supply chain collaboration.

Supply chain collaboration enablers are the keys to value creation. They are mostly about positive reaction (problem solving, not punishing), trustworthiness, helping each other, protecting your partner and sharing the benefits. Actually the system is acting like human nature. As long as you protect, and share with your partner with positive intent, you will always be the number one for your partner. Organizations and business life is surrounded with self-interest or advantage, so if an organization can share the benefit and protect its team, partner, supplier than they can collaborate easily and make their relations even stronger comparing to its competitors. Eventually it will affect the costs, inventories, development cycles, customer service, delivery cycles, public image and competitive advantage.

There are four main supply chain enablers and these are organizational infrastructure, information technologies, strategic alliance, and human resource management.

A deeper analysis in these titles will give us more details. For instance in organizational infrastructure: there has to be a coherent business strategy that aligns business units towards same goals; formal process flow methodologies to enable the SCM improvements; people committed to and responsible for cross-functional processes; right process metrics identified to guide operating units’ performance toward strategic organizational SCM objective. In information technologies: the operations, marketing and logistics data should be coordinated within the company; data should be readily available for the managers; operations, marketing and logistics data should be coordinated between companies; linking SCM to ERP systems is vital as well. In strategic alliance: expectations should be clearly stated, understood, and agreed upon up front; collaborating on supply chain and product service strategies; top management of partnering companies interface on regular basis; top management communicate why strategic alliances are important and should be pursued. In human resource management: The organization should source, hire, and select skilled quality people at all management levels; find change agents to champion SCM implementation; compensation and incentives in place for SCM performance; finding the internal process facilitators; have appropriate job description and responsibilities.

Manufacturer Alpha is a kitchen appliances manufacturer and has a supplier A for electric contacts. In their supply chain collaboration they have a common interest of the same business scope, kitchen appliances. Also the supplier A wanted to exist in Country B and Manufacturer Alpha wanted to have those electric contacts in Country B. Manufacturer Alpha did have an option to select another brand, supplier B, with the same price but they preferred to share this info with the supplier A and told them they did not wanted to work with supplier B and emphasized that they wanted to do business with supplier A. This openness increased the collaboration and they started to work together. In recognizing the importance of who and what, supplier A was aware of Manufacturer Alpha power in Country B and didn’t want to lose them on the other hand Manufacturer Alpha knew the power of supplier A and their technology. So Manufacturer Alpha sees supplier A as a path to success.

After starting doing business with supplier A, both parties started helping each other. Supplier A sent their design engineers to help Manufacturer Alpha to improve their designs according to their electric contacts and Manufacturer Alpha helped supplier A about learning the Country B market’s potential in this field. They both had clear expectations from both sides. These both companies adjusted their working capitals to one another at the time of economic crisis over the world.

And at the beginning this relationship was standing on the trust between two sides.  However, after realizing the huge potential in Country B market, supplier A betrayed Manufacturer Alpha. Instead of supporting only Manufacturer Alpha they have started to support every other opponent in the market. So the trust was broken between two companies. In addition to that there was an absence of a leader in Manufacturer Alpha to pursue this business. Also the technological infrastructure was not enough to maintain the perfect relationship in inventory level. As a result this mutual relationship did not last forever and had lost its longevity because of missing same enablers in Manufacturer Alpha.

Organizations will have enablers and impediments in collaboration. To be successful they need to follow the steps of enablers of SCM on the other hand they need to overcome the impediments of SCM to avoid mistakes. To be able to stay away from troubles they need to pursue the highest technology and should adopt themselves to this technology. They should hire more intelligent professionals so that they won’t have a lack of limited view of the entire supply chain. In addition to those these companies should improve their accessibility for their partners, make it easier to do business with, and avoid inadequate communications.

Obeying these rules and avoiding impediments will bring the capability to apply the enablers of SCM and the after applying the enablers of SCM the success of the company will be accomplished.

**4) What is the difference between a supply chain and a value chain?**

**Value Chain vs. Supply Chain: An Overview**

The term value chain refers to the process in which businesses receive raw materials, add value to them through production, manufacturing, and other processes to create a finished product, and then sell the finished product to consumers. A supply chain represents the steps it takes to get the product or service to the customer.

**Value Chain**

The idea of a [value chain](https://www.investopedia.com/terms/v/valuechain.asp) was pioneered by American academic Michael Porter in his 1985 book "Competitive Advantage: Creating and Sustaining Superior Performance." He used the idea to show how companies add value to their raw materials to produce products that are eventually sold to the public.

The concept of the value chain comes from a business management perspective. Value chain managers look for opportunities in which to add value to the business.

They may look for ways to cut back on shortages, prepare product plans, and work with others in the chain to add value to the customer.

There are five steps in the value chain process. They give a company the ability to create value exceeding the cost of providing its good or service to customers. Maximizing the activities in any one of the five steps allows a company to have a competitive advantage over competitors in its industry. The five steps or activities are:

1. **Inbound Logistics:**Receiving, [warehousing](https://www.investopedia.com/terms/w/warehousing.asp), and inventory control.
2. **Operations:** Value-creating activities that transform inputs into products, such as assembly and manufacturing.
3. **Outbound Logistics:** Activities required getting a finished product to a customer. These include warehousing, inventory management, order fulfilment, and shipping.
4. **Marketing and Sales:** Activities associated with getting a buyer to purchase a product.
5. **Service:** Activities that maintain and enhance a product's value, such as customer support and warranty service.

In order to help streamline the five primary steps, Porter says the value chain also requires a series of support activities. These include procurement, technology development, human resource management, and infrastructure.

A profitable value chain requires connections between what consumers demand and what a company produces. Simply put, the connection or sequence in the value chain originates from the customer's request, moves through the value chain process, and finally ends at the finished product.

Value chains place a great amount of focus on things such as product testing, innovation, [research and development](https://www.investopedia.com/terms/r/randd.asp), and marketing.

**Supply Chain**

The [supply chain](https://www.investopedia.com/terms/s/supplychain.asp) comprises the flow of all information, products, materials, and funds between different stages of creating and selling a product to the end user.

The concept of the supply chain comes from an operational management perspective. Every step in the process including creating a good or service, manufacturing it, transporting it to a place of sale, and selling it is part of a company's supply chain.

The supply chain includes all functions involved in receiving and filling a customer request. These functions include:

* Product development
* Marketing
* Operations
* Distribution
* Finance
* [Customer service](https://www.investopedia.com/terms/c/customer-service.asp)

Supply chain management is an important process for most companies and involves many links at large corporations. For this reason, supply chain management requires a lot of skill and expertise to maintain.

**5) Elaborate the functions to be performed in a public warehouse**

This is the basic function of every warehouse. In addition to this, warehouses nowadays also perform a variety of other functions. In this section let us learn about the various functions of warehouses.  
  
Warehouses perform the following functions  
i. Storage of goods  
ii. Protection of goods  
iii. Risk bearing  
iv. Financing  
v. Processing  
vi. Grading and branding  
vii. Transportation  
  
**We shall now discuss each of these functions.  
i. Storage of goods**  
The basic function of warehouses is to store large stock of goods. These goods are stored from the time of their production or purchase till their consumption or use.  
**ii. Protection of goods**  
A warehouse provides protection of goods from loss or damage due to heat, dust, wind and moisture, etc. It makes special arrangements for different products according to their nature. It cuts down losses due to spoilage and wastage during storage.  
**iii. Risk bearing**  
Warehouses take over the risks incidental to storage of goods. Once goods are handed over to the warehouse-keeper for storage, the responsibility of these goods passes on to the warehouse-keeper.

Thus, the risk of loss or damage to goods in storage is borne by the warehouse keeper. Since it is bound to return the goods in good condition, the warehouse becomes responsible for any loss, theft or damage, etc. Thus, it takes all precautions to prevent any mishap.  
**iv. Financing**  
when goods are deposited in any warehouse, the depositor gets a receipt, which acts as a proof about the deposit of goods.

The warehouses can also issue a document in favour of the owner of the goods, which is called warehouse-keeper’s warrant. This warrant is a document of title and can be transferred by simple endorsement and delivery.

So while the goods are in custody of the warehouse-keeper, the businessmen can obtain loans from banks and other financial institutions keeping this warrant as security. In some cases, warehouses also give advances of money to the depositors for a short period keeping their goods as security.  
**v. Processing**  
Certain commodities are not consumed in the form they are produced. Processing is required to make them consumable. For example, paddy is polished, timber is seasoned, and fruits are ripened, etc. Sometimes warehouses also undertake these activities on behalf of the owners.  
**vi. Grading and branding**  
On request warehouses also perform the functions of grading and branding of goods on behalf of the manufacturer, wholesaler or the importer of goods. It also provides facilities for mixing, blending and packaging of goods for the convenience of handling and sale.  
**vii. Transportation**  
In some cases warehouses provides transport arrangement to the  
bulk depositors. It collects goods from the place of production and also sends goods to the place of delivery on request of the depositors.

**6). Describe about ―cross-docking and its importance**

Many things determine the growth of manufacturing companies. Some of the examples of such things are the transportation of products, sources of raw materials, and machinery.

In the modern world of business, people in the industry must use machines when producing products and services for sale.

Manufacturing firms must rely on automated machines to increase production. Machines also enable manufacturing companies to market their products and services.

Machines like computers enable manufacturers to advertise their products and services on the website, social media sites, and use of emails.

The availability of raw materials enables companies manufacture products without halt. Transportation of products is another thing that cannot be left out in the operation of the manufacturing firms.

Trucking, logistics, and cross-docking are terms used while transporting products from one place to another. Transport is the general term used to describe the transfer of products and services from one destination to another.

Products can, for example, be transported from wholesalers to retailers in the supply chain. Logistics is [this](https://www.floship.com/cross-docking/) term used to describe the process of planning and to control the transportation of products and services from manufacturers to consumers.

Cross-docking is closely related to logistics. Cross-docking is the process of transporting manufactured products from the plant directly to customers without storing them in a warehouse.

This technique involves the use of inbound and outbound tractors to make products to reach to customers.

Inbound trucks are vehicles that are involved in loading the products from the manufacturing plant directly to shipping tractors.

Outbound tractors are vehicles that play a role in transporting the manufactured products directly to customers without any handling by the second party.

This method removes the need to have other suppliers in the chain. Cross-docking is being embraced by many manufacturing plants nowadays.

Cross-docking is of great importance in some ways. Cross-docking aids in sorting the products before they are loaded into the shipping tractors.

Sorting aids in distributing the products to individual and multiple customers. Cross-docking makes the manufacturing company remove the need for building warehouses.

In actual sense, the process of putting manufactured goods into the warehouse before shipping is tiresome. Cross-docking removes the chances of handling the products before they reach to customers.

Frequent handling of the products sometimes damages their packaging items. Customers are known to get satisfied by getting non-tampered products through cross docking method. Manufacturing companies save much of their cash through cross-docking. .

**7). Discuss activity profiling in a warehouse**

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| --- |
| A warehouse is a complex and busy supply chain entity, where it is difficult to get an accurate sense of what is going on.  Data analytics on warehouse comes under activity profiling, which carefully measures the activity in warehouse and analyses it statistically. Essentially first step of any warehouse project is to understand the customer orders, which drives the system.  A detailed analysis of warehouse can be done with historical and currents data, which can help consultants and practitioners in the field to make decision on various kinds of issues like storage and handling alternatives, slotting options, pick line requirements, system requirements, pick methods, and order releasing strategies. |
|  |
| **Activity Profiling** |
|  |
| There are two main categories of warehouse profiling, customer order profiles and item activity profiles. A customer order profile deals with behaviour of customer orders, is an outbound activity i.e. ordering patterns of the customer orders.  An item activity profile is related to the in-house behaviour of items in the warehouse i.e. dynamics (frequency, cube movement etc.) of the stock keeping units, provides support in making decision for storage and slotting options.  A good analysis can even give us an idea of how to prepare the warehouse for future needs and can establish bench marks on warehouse operations like receiving, put-away, order-picking, checking, packing, shipping etc. |
|  |
| **Warehouse Slotting for Productivity** |
|  |
| Order picking is the most labour-intensive and costly activity in the warehouse. The order picking cost can be saved by minimizing the travel distances through allocation of most popular items near input/output point in the warehouse and slotting related stock keeping units together.  The relationships among the stock keeping units can be defined in term of affinity and association, where affinity is a non-random (have some natural correlation) occurrence of two or more stock keeping units appearing on a single order and association between two stock keeping units is absolute number of pair picks in an order data. |
|  |
| **Affinity Factor** |
|  |
| The affinity factor quantifies the degree of affinity between a pair of SKUs. It is defined as the ratio of the observed number of times a pair of SKUs is picked to the number of times these SKUs are expected to be picked together. Formally, the affinity factor can be defined as: |

**8). Describe the various storage systems used in a warehouse for different applications**

There are 5 principle kinds of warehouse storage:

* [Pallet racking](http://www.awsltd.biz/storage-systems/warehouse-pallet-racking/)
* [Shelving](http://www.awsltd.biz/storage-systems/warehouse-shelving/)
* [Mobile shelving](http://www.awsltd.biz/storage-systems/mobile-shelving/)
* [Multi-tier racking](http://www.awsltd.biz/storage-systems/multi-tier-warehouse-storage/)
* [Mezzanine flooring](http://www.awsltd.biz/mezzanine-floors/).

They all have very particular applications, which depend on the size, weight and nature of your stock, as well as the size and layout of the warehouse.

Within each category, especially pallet racking and storage there are many subcategories.

Here’s a rundown of them all, to give you an idea of which one(s) will suit your warehouse best.

**Pallet Racking**

Pallets: the most common and essential component of logistical stock storage and movement. Made of wood, metal or plastic,

Anything which is delivered and stored in boxes and requires inventory logging is a prime candidate for pallet racking.

The most important considerations with pallet racking are access/movement, weight, stability and space.

Weight limits must be strictly adhered to and all pallet racking must be inspected and maintained regularly to make sure that it is stable enough not to risk toppling.

Aisle space required will depend on your specific space requirements or limitations, but consider whether forklift access will be just forwards and backwards or require a turning circle with a pallet attached.

**There are 13 main types of pallet racking:**

* Carton Flow Racking/Carton Live Storage – bays with roller tracks and gradients, so that stock can roll down and be replaced. Better for smaller, unboxed stock, hence the name.
* Cantilever Racking – Storage utilizing beams which anchor at one end, primarily used for timber, piping, plasterboard and other long loads.
* Coil Racking – You might have seen this used to store chains and cables in DIY stores, it’s just a system of spooling cools, allowing lengths to be cut.
* Double Deep Racking – Pallets stored two rows deep, requires a specialized forklift or a double deep handling attachment.
* Drive-In Racking – Pallets placed so that they can slide back on a rail, good for creating more space.
* Drive-Through Racking – The same as drive-in racking, but goods can be accessed from two sides instead of one
* High-Bay Racking – Racking with racks fixed to the walls and roof for higher storage, a fully automated retrieval system is usually involved.
* Mobile Racking – Racking with sensor technology for automated retrieval.
* Narrow Aisle Racking – A narrower system for increased storage, recently forklifts have been developed which can work effectively in these systems.
* Pallet Live Racking – Racking with inclined rollers, also known as gravity flow racking
* Push Back Racking – Racking with deeper aisles so that stock can be ‘pushed’ further into the racking
* Shuttle Racking – A shuttle is built into the shelving system which moves the pallets to the back of the aisle.
* Vertical Racking – Upright storage for long stock, secured by metal arms. Stock is usually stored individually for easy access.

**Shelving**

This one is fairly self-explanatory. Stock sits on static shelves rather than mobile pallets, so cannot be retrieved via forklift. But shelving is ideal for quick, easy access to stock, just as if you were in aisles at a shop.

For this reason, it’s far more applicable for small, light items requiring manual picking and placement – such as agricultural produce, clothing, machine parts and components and small products. Anything too heavy to carry alone can’t be stored this way.

Many shelved items need to be handled with care. Height is the main thing to take into consideration after weight, as high shelves require ladder access. There are two main types of static shelves:

* Short Span Shelving Better suited to smaller stock items, although most systems are adjustable.
* Long Span Shelving Larger units with space for bigger items.

**Mobile Shelving**

Often used for archiving and data storage, mobile shelving uses storage shelves fitted with a traction system.

The kind of stock kept in this environment can be kept in closely packed, compact storage when access isn’t needed, making it an ideal solution for archiving and retail store back areas.

For smaller premises where space is at a tight premium, mobile shelving represents an ideal way of making the most of the available storage space.

Typically, mobile shelving units are on a level track way, with the track either built into the floor or mounted on top.

In order to specify the tracks, a clear definition of the type of flooring in the premises is needed, and in particular whether it is possible to lay tracking which will be stable, remain in place and not degrade the floor integrity.

Mobile shelving solutions also use a locking mechanism on the shelves to keep them secured when they aren’t in use. Consideration should also be given to whether manual or mechanical mobile shelving system is required.

**Multi-Tier Racking**

Multi-tier racking is ideal if you want to take full advantage of the vertical space you have in your warehouse. Multi-tier racking systems have different tiers, much like floors, so that stock can be accessed manually all the way up to the maximum limit of vertical storage.

Often this is achieved with a system of mezzanine flooring and stairs, although sometimes scissor lifts are also used. The storage they offer is very dense, so it’s most effective when you have large quantities of stock with a relatively small individual unit size.

**Mezzanine Flooring**

A warehouse mezzanine floor can yield a massive amount of extra storage space. Effectively, you’re just constructing a second floor above existing aisles, which provides extra shelving space, working areas for staff to pick and pack or check and move stock on.

Mezzanines don’t always need to be restricted to a single level; they can provide two or even three extra levels.

Mezzanine flooring technology has advanced dramatically in recent years, with a whole variety of custom designs on offer.

Because of these advances, virtually all mezzanine flooring is custom designed and fitted to integrate with most storage situations in virtually any warehouse situation.

It’s best to use a company that can manage the whole process for you – from designing and installing bespoke mezzanine systems to advising on how you should fit out and make best use of your additional space, as well as embedding the important additional features you may need.

Options typically include suspended ceilings, integrated light fixtures, lift systems (automatic or manual), through-floor conveyers and fire safety appliances. Take careful note of how heavy or fragile your stock is when deciding.

**9). Describe briefly about the qualitative factor rating method for the selection of location of a warehouse.**

Deciding on a warehouse location is a significant decision that impacts every aspect of a business finding a balance between a convenient location and a reasonable rent price is integral.

The location of your warehouse directly contributes to the efficiency of your company as well as the overall customer experience.

If you’re on the search for leasing or purchasing a warehouse location, you know just how difficult it can be to make such a monumental decision.

Here are some factors to consider ensuring your company’s ability to effectively serve your customers in an efficient, effective, and profitable manner.

**1. Desired Consumer Base**

When choosing a location for a warehouse, keep your customers’ locations in mind. Determine your customer base and pinpoint the region or regions that you are trying to serve.

Having a warehouse location that is in close proximity to your desired consumer base allows for faster deliveries.

Not only will deliveries be faster, but the close proximity will also reduce shipping costs.

Faster deliveries and reduced shipping costs will positively contribute to the consumer’s overall customer experience when the shipping process is faster and cheaper, the customer will be happier and will be more likely to remain a loyal customer.

## 2. Proximity to Carrier Services

Consider your warehouse’s proximity to carrier services. If your warehouse is located near carrier facilities, it will streamline the process of shipping your product(s) to your customer.

Find a good balance find a location that offers both convenience and proximity to your customers as well as a carrier service, making the shipping process easier and faster for both your company and the customers.

Determine a reasonable balance of distance between the manufacturing location, warehouse storage, and customer and consider the transportation and shipping costs that go with that distance.

## 3. Storage Requirements

Take account of any special accommodations that you may have to make for your products.

Are your products hazardous? Flammable? Fragile? Make sure that the proper accommodations are able to be made at your desired warehouse location.

Plan ahead. Don’t waste time and resources finding a warehouse space and then outgrowing the space shortly after.

Save time and effort by estimating projected growth to be able to figure out an accurate idea of the storage your company needs.

Consider leasing options that allow flexibility in storage space based on changing buyer demographics that your company may experience.

Make an educated observation of these factors to ensure the safety of your warehouse location.

## 4. Workforce Availability

The demographics of the warehouse location may be more important that the physical space.

Determine your labor needs. Not every geographic location is able to provide the desired workforce with the right skills and right price.

Consider the supply and demand of workforce availability -- low workforce availability and high demand will drive salaries up.

Workforce availability can impact overall company costs, therefore doing research on the geographic location is integral.

To research and understand the demographics of the area, research the educational attainment and income levels of the city or state, which can be found on government websites.

Understanding the workforce is important because it impacts your company’s employee retention and turnover rates, productivity, and employee related costs.

**5. Longevity**

Consider the longevity of your warehouse location will it be able to accommodate the growth or shrinking of your business?

Analyse the potential growth of your company and determine if the warehouse location has room for expansion if needed.

If your product is seasonal, consider finding a location that offers seasonal leases or working with companies, such as [Flowspace](https://www.flow.space/), that offer flexible in storage options. Understand the potential of the warehouse space and plan for longevity.

Choosing a warehouse location requires extensive research and planning. Make sure that you consider these five factors when considering potential warehouse locations.

The location of your warehouse can be mutually beneficial for your company as well as your customers, overall providing a more efficient, effective, and profitable experience.

**10). What are the risks associated with backdoor (maverick) purchasing as opposed to open tendering most common in public procurements?**

Backdoor selling is a [social engineering](https://searchsecurity.techtarget.com/definition/social-engineering) practice used by a supplier or seller to gain a [competitive advantage](https://searchcio.techtarget.com/definition/competitive-advantage) prior to negotiations or competition for a contract or sale.

The practice reduces the buyer’s leverage and the need for negotiation, thereby often assuring a contract or getting a better price for the seller.

Backdoor selling involves asking questions to acquire information that the buyer wants to protect or that competitor’s lack.

The salesperson would not generally target employees involved with [procurement](https://searchcio.techtarget.com/definition/IT-procurement) but other staff who are unlikely to recognize the value of the information sought.

A product or goods seller might probe in areas like price, quality, delivery, service life and the performance of competitors. Relative to a contract, a supplier might ask questions about which requirements were most important or how essential deadlines were.

Based on this knowledge, a supplier can emphasize requirements and contract elements that are most important; a seller might push for a higher price and include fees that might otherwise have been forgone as an incentive.

By circumventing standard procurement procedures, backdoor selling essentially [games the system](https://whatis.techtarget.com/definition/gaming-the-system) designed to protect the buyer’s interests and ensure fair competition among suppliers.

Grey-area techniques like backdoor selling are often used by experienced sales persons and included in sales training materials.

Despite its common use, however, backdoor selling can be considered a low-level form of [industrial espionage](https://whatis.techtarget.com/definition/industrial-espionage).

Backdoor selling can also refer to the selling of goods to a consumer outside normal purchasing rules. One example of this type of backdoor selling is sales by wholesalers direct to consumers, contrary to existing agreements with retailers.

The risks associated with backdoor or maverick buying and selling are

(1) Purchasing policies and procedures will not be followed

(2) Higher cost due to different prices from suppliers for same items

(3) Inability to achieve efficiency and economy of scale by combining like purchases across a company.

Purchasing is interested in controlling this business practice because it bypasses the control of purchasing authority. Maverick

**11). Discuss the advantages of electronically transactions between a buyer and seller.**

There are many benefits to be found from using e-procurement within an organization, and the following are just some of the key points:

**Reduced Transaction Time**: individual business activities (transactions) can be completed much more quickly; they are not restricted by office hours and may not even need human intervention, thus increasing the capacity to complete transactions on a real-time basis. This means that downstream processes are not constrained by waiting for transactions to be completed.

**Electronic catalogues**: the development of e-catalogues has enabled organizations to market their product offer electronically, this has been a fantastic marketing tool for sellers and for buyers, there is price transparency (you can easily see how much items cost) and buyers can compare offers from various e-catalogue vendors.

**Increased Standardization**: With the electronic catalogues mentioned, there has been a move by some suppliers to offer a more standardized offer, thus allowing buyers to easily compare the offers from e-catalogues; however care must be exercised in these comparisons as it is difficult to assess the quality of products without samples. If in doubt request samples and take time to make your own assessment.

The great news is that most catalogue sites operate in a very similar way, and they are very easy to set up allowing multiple business users to undertake some of their own procurement…this keeps the business running, sourcing the day-to-day needs of the business and allows procurement people to continue to develop great value-adding relationships.

**Wider Spread Supplier Bases**: Because the virtual e-procurement portals are web-based, buyers can search suppliers worldwide, meaning a wider selection of products and services are available to the organization meaning that when items are not available locally, it is still possible to source these.

It is important to remember the time and cost of shipping goods, but it’s great to know that it is possible to source items from somewhere in the world!

**Simplified Global Procurement:** With the e-procurement applications supporting various languages, currencies, international taxation and financing, shipping regulations and more, it is simple for buyers and suppliers in different countries worldwide to communicate and co-operate.

**Increase Productivity**: As e-procurement automates some of the procurement and wider business processes typically handled by employees, this will free up time for the team to spend on more strategically significant functions and tasks.

For example with automated matching of invoices, goods can be ordered, processed and paid in a matter of minutes; the key however is to ensure that the supplier is set up in the buyers systems support as much automation as possible.

**Simple Configuration and Scalability**: E-procurement applications can be configured to suit the individual needs or both the buyer and the supplier, and can grow with the organisation as needs be.

It is important to select suppliers for both the current requirement as well as possible future need so gaining an understanding of the technical infrastructure development plans of suppliers will help buyers to select possible longer term partners.

**Creation of Trading Communities**: Because the e-procurement applications are internet based, they allow for both vertical and horizontal trading communities to be developed. This means buyers can consolidate buying power and it also opens up opportunities for new supply chains.

The opportunity to consolidate the requirements of smaller buyers via consortia or trading communicates has enabled smaller business to access prices historically reserved for bigger buyers, thus fuelling a fast developing SME sector.

Many Chambers of Commerce and other local business organizations operate such buying communities.

**More Cost Efficient**: With the time reductions and increased supplier selection, development of trading communities, more opportunities for purchasing surplus goods and services at below market price, and much more, it isn’t surprising that e-procurement proves to be much more cost efficient than traditional procurement.

**12). Describe the challenges involved in implementing e-procurement systems?**

Adopting an e-procurement system has brought great benefits to the government and it is also another way for the government to save on the management cost and at the same time become more efficient in the procurement process of goods online.

The main advantages e-procurement can deliver include cost reduction, process reorganization, improved contract fulfillment, increased spending under management, and many other benefits

The significant cost saving of e-procurement to the government is in the reduction of cost and effort of processing the purchase order which can be manipulated electronically, as well as the marked reduction in inventory costs and decreased order fulfillment time.

Previous researchers (Ronchi, 2010) identified and measured four types of cost savings from using the e-procurement system, namely order cost, administrative cost, lead-time order cost, and opportunity cost of capital.

Meanwhile, other researchers (Thai, 2001) concluded that practicing e-procurement will provide quality bidding, efficient timeliness, cost saving, minimizing effort in doing business, reduce financial risks and technical risks, and finally increase supplier competition, which would lead to save cost of buying goods or services at high prices.

Additionally, it was stated previously (Layne and Lee, 2001) that bidding for public sector projects is the best place to practice e-procurement of goods and services, and this is because of the high transparency of information resulting from electronic bidding

**13. Why is it important to measure and monitor supplier performance improvement over time?**

The goal of performance measurement is improved supplier performance. It is important to measure and to monitor supplier performance improvement over time so that the company can differentiate between high performing and low performing suppliers.

Continuous measurements allows improvements opportunities (loop D in purchasing cycle) to be identified along the way.

Feedback can be provided to the suppliers based on objective measurements to track their improvement development efforts.

The firm can also gather the quantitative data to support future purchase decisions, particularly continuing (loop C) or discontinuing (loop E) a supplier relationship.

How does a just-in-time purchasing and production system reduce the need for certain purchasing documents?

A just-in-time purchasing and production system allows a company to reduce the need for certain purchasing documents by relying on direct means to affirm the timely arrival of appropriate quantity and quality of required supplies.

For instance, a firm may assumed that as long as its production lines are running smoothly, all the necessary supplies are reaching the production floor.

Such a JIT system may allow the elimination of packing slips and inbound material inspection.

It will also eliminate the need to send duplicate copies of the packing slips to all relevant departments.

The supplier may also be paid more promptly as payments will be made for JIT deliveries as scheduled unless the accounting department is informed to hold payment.

A similar system called Back flush accounting allow a firm to pay only for the components that are used. Defective components which are not used are not paid for.

Having an SPM program in place helps your organization:

1. **Avoid supply chain risk and disruptions**

If you are not deeply familiar with the third party vendors making up your supply chain, it will be difficult to put measures in place to prevent interruptions and reduce the incidence of risk exposure.

Supplier performance management provides in-depth visibility into the risk a supplier may pose so you can put measures in place to reduce or eliminate that risk as it relates to your supply chain.

1. **Protect and improve brand/reputation**

A number of corporate brands have been tarnished by the actions of their suppliers think automobile recalls as a common example.

SPM can help you track supplier performance against these KPIs which will enable you to enact corrective actions early and keep your brand and reputation strong in the eyes of your customers and partners.

1. **Avoid costs and achieve savings**

There are a variety of cost factors tracked using supplier performance management which affect both hard and soft dollar costs.

Lack of timely and accurate vendor information can have huge impact on costs and can prevent you from capturing savings.

Not only can you track supplier performance on cost and savings-related KPIs, the information provided by an SPM system can contribute to cost avoidance and savings achievements because it centralizes supplier data into a single source of truth for everyone interacting with vendors.

1. **Segment and rank vendors**

As noted in the point above, supplier performance management is useful beyond the supplier managers in your organization.

For example, SPM gives procurement groups visibility into specific groups of suppliers and their overall ability to meet your organizations expectations and requirements.

With performance data in hand, procurement can make data-based decisions regarding where to direct spend.

1. **Collaborate with suppliers**

When you collaborate closely with suppliers you create new value for your business. The data collected through a supplier performance management solution can help to start these conversations because it provides the supplier with a view of what is important to your organization.

The results are numerous: continuous improvement of the supply base, creation of realistic contracts based on past performance, more communication with suppliers, formation of common goals, and the establishment of trust.

Ultimately, SPM drives the creation of meaningful and mutually beneficial relationships with suppliers.

1. **Improve internal processes**

Creating a SPM process is a great step towards optimizing your supplier management program. By utilizing a technology-based solution for SPM, organizations can achieve a standardized and automated approach for creating scorecards, issuing and tracking scorecards for completion, and in-depth reporting and analysis.

If you tack this onto an existing supplier information management (registration, on boarding, qualification) process, SPM data will contribute to a complete supplier management lifecycle.

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