Hypothesis supply chain management in today's business climate

Business, Management

Gathering and distributing information is as old as the human race itself. From the early days of cave paintings to today" s modern computer databases, human beinghas constantly searched to improve the way we communicate. In the business climate of today you must either have a state of the art information network or no clients. The cutthroat world of bushiness is cruel if your company can not keep up with the cutting edgetechnology. The way to beat the competition is to have the most state of the art information gathering and distribution network.

Having this type of network is not the only battle, being able to use this system properly comes in handy as well. This paper is a walk through of information technology as it relates Supply Chain Management. Along this journey stops in the past, present, and future are made. Hypothesis Supply Chain Management in today" s business climate is the wave of the future. The gathering and distribution of information is the most important task in business today. History of Information Technology The evolution of Information Technology starts from the inception of the humancommunication.

The real leaps and bounds came at the birth of the computer. Previously gathering of information took place without the use of real technology. Granted the use of writing letters and the use of telephone and telegraph speed the flow of information. These early forms did not have great storage capacity or easy access by many parties. The best analogy to use is a row of matches all lined up end to end. Traveling from one end to the other is the way the precomputer days had information flowing.

With the use of a computer as a distribution point the picture of the matches changes from the line to a circle, with the distributor in the middle reaching all concerned groups at the same time. This visual perception shows the need for Supply Chain Management. The reason for Supply Chain Management is to makemoney. The easiest way to do so is to save time and space. The quick distribution of information does both. Information technology was first used as just a simple and efficient way of giving information out within the company.

The main reason that these first uses were so simple is that the computer was also in its developmental stages. (Gordon, 1996) The painful fact was as much as companies wanted to more utilize the technology at hand it was expensive and consumed rooms full of space. With the later development of the desktop workstation corporations were better able to put the information at the fingertips of all their employees. This giant leap in both computer technology and information technology paved the way for some of the Supply chain" s current uses.

The previous uses where to gather information from satellite sites throughout the company's domain and bring this information back to a central processing point. Examples of the types of information transferred are employee and supplier records, inventories, and sales figures for the branch. This one way flow of information was the old school of thinking when it comes to thescienceof information management. Supply Chain Management says that you have your information flowing in more than one direction to work.

Specific hardware changes that helped boost the importance of Supply Chain Management are the shrinking of both the size and cost of each computer. The reduced size of memory chips made for the easy shrinkage of the computer due to the large portion of space that this component takes up. Other hardware improvements include the reduced size of the tubes in the monitor making them less like the floor console televisions of old. Along with all of these improvements another strange thing happened, the price went down, as new technology became available.

The use of the computer to distribute and gather information became affordable to all companies great and small. Increased storage capacity allowed companies to gather and hold more information at their fingertips. (Davidow, 1996) The other changes in Supply Management came in software development. The increased power of computers led software designers to actually create programs like databases and spreadsheets. The ease of use and organized storage of information made new programs appealing to the business world.

The need to store and distribute information became the market niche for companies like Lotus, JD Edwards and Computer Associates. Addressing concerns such as security and accesses were two points of emphasis for corporate software buyers. The big hurdle to cross was not how to just gather information within your own organization but to also explore outside those boarders to gain more cost and time savings with suppliers and customers. The tool that answered this call was the development of the Internet and the World Wide Web.

This network of computers combined with the new hardware allows for the communication of information around the world in seconds. The other thing the Internet brings to the table is information that any one could access even from the privacy of their homes. The important change here is now you can reach potential suppliers and customers very inexpensively. Remember that information is not just for company employees, but the consumer who likes to make informed purchases. Enhancement of networks and systems allows your suppliers to solicit you to meet your need.

This is different from the old style in which you contact the vendor with a need. With all the legwork being done to provide your company it" s supply" s you can concentrate on giving the customer what they want. All this is possible from properly managing your Supply Chain (Ross et al. , 1996). Current Supply Chain Applications Companies use Supply Chains in many different ways that suit their business needs. A company like Mrs. Fields cookies uses its Supply Chain resources to gain valuable information about each of its branch stores material needs.

Along with this flow of information to central spot, the company provides direction and guidance back to the store managers from afar. By evaluating sales and inventory data district mangers make recommendations as to sales improvements and continued growth. Projections on material usage and personnel decisions and scheduling are handled from a central point. Companies like Microsoft use information technology to direct a global customer base and handle questions and concerns surrounding their product. Microsoft customer service representatives handle hundreds of

electronic messages sent via the Internet about the customer" s latest purchase.

Other uses include companies like Martian Marietta who use information gathering through the internet and suppliers to bid lower on contracts. The company does this by sending out specs of the project and letting teams of manufacturing employees" design to way to build the product. All the product requirements go to the suppliers for quotes and delivery schedules. From there the information goes back to the sales force who puts a dollar figure to the bid. This information exchange takes usually less than one week while leading competitors take over months.

The reason other take so long is because of the face to face meetings and data organization time. Martin Marietta" s quick turn time does more than allow the sales force to bid on many contracts but allows for very accurate price quotes as well. Today many companies use the Supply Chain in different ways to suit their own needs. The basic principals are still the same, gain information and mold it while cutting down on the time it takes to get material and distribute the product to the customer. Gordon, 1996) One of the major tools used today is the Internet. Firms throughout the world use this global communication medium.

The biggest importance to companies is keeping them in touch with the doings of other similar companies around the world. Uses of the Internet include soliciting potential customers as well as finding out what the competition is doing. This inexpensive form of advertising has become a

favorite for marketing directors of all firms. This new medium allows for the connection to previously unreachable markets. Some companies like Amazon Books are a virtual company using the Internet as its headquarters. What Amazon does is sell books, but instead of being located in the local mall their location is Amazon. om on the Internet.

This is an example of a true virtual Supply Chain, by reaching customers and suppliers alike with out actually being there. To place an order all that is requires is to gain access to the virtual store and then find what book you are looking for. The book arrives at your door by any number of package carriers, with a savings of 15 % or greater over a local bookstore. The reason prices are so cheap is there are no locations to lease and few employees run a store that services literally millions of customers from one location.

Importance of Information In today" s global economy the transfer of a company's information is a daunting task. The role of a CIO in today" s large companies is more important than ever. Some companies have given the CIO equal ranking to that of the CEO. The current structure of the economy dictates that a company must be able to manage its information and Supply Chain assets. The most important part of any organization is the people. Tapping the information that is available is the task of the CIO.

The job of knowledge management falls as theresponsibilityof all employees, though the majority of the burden lies on the CIO. Guiding and directing the Information assets of the company is also a task of the CIO. Falling behind competitors is a dangerous proposition, utilizing all of your employees and

suppliers is the only way to gain new information and stay one step ahead of the competition. (Davenport, 1996) Other current IT considerations include the cutting down on time and space between customer needs and the companies answer to those needs.

A prime example is the American auto industry. In the 1970" s the turn time for a concept car to make the production line was any where between three and five years. Now though the use of the Supply Chain automakers converse with what the customer wants then relays the information to the design team then to purchasing then finally on to the production team to complete the build. The current turn time is around 18 months. This is a time reduction of over 50%; the cost savings are tremendous. The implementation process takes less time and the customer gets more input to the final product.

These are the ideal benefits of Supply Chain Management at work for you. Some companies have even passed some of the money they are saving back to the customer. (Gerkits, 1997) Asian companies have a great idea that relates to information technology and the Supply Chain. This idea is that they share information between competitors not just with suppliers and customers. The reason that they do this is to cut down on research and development costs. The Information Technology has endless possibilities in this field, a general storage position that is accessible by all parties.

The idea is that you dump information into the pool and you pull out information that is beneficial to your organization. As the information resides

in a database, a person has the opportunity to mold that knowledge and redeposit the information in the knowledge warehouse thus, synergy results. This above process allows for two plus two too equal 5 or more. This information sharing is a fairly new concept to American companies and especially new in the world of Supply Chain Management. The possibilities are endless provided that you control the flow of information and every participant is an equal benefactor.

Rasmus, 1996) This sharing of in formation leads to the major concern of Supply Chain Management as it progresses into the next century. That is the issue of security, and how to control that sensitive information does not fall in to the wrong hands. Conceivably your company's information assets, the people, could sell your in formation to others on the world market. The business espionage game has become big money; companies will pay any price to get an edge. This scenario looks less likely with increased sharing of information. Security remains a real concern with the internal access to information.

The problem comes when your supplier has permissions to your database and uses this information to unfairly compete with your customers. With all employees having new information at their fingertips how do you prevent retrieval of personnel files and trade secrets to those who do not have the need to know? The answer is in many of today" s current software packages; the main stream idea is to limit access. What a company can do is install the information transfer programs but only allow certain sections to certain

people. This variety of system is very popular with today" s companies because it solves the problem and is very inexpensive.

Remember that anyone who wants to crack your security system can if they spend the right amount of money and time. (Gopal and Gagon, 1995) Current Company Values Due to recent large jumps in the value of the Stockmarket some analysts have thrown out the theory that companies are over valued. This statement may be true under the old accounting principles where a company's worth is the amount of liquid assets it holds. With the increased emphasis on information technology and Supply Chain Management companies are being looked at in a new light, this light is that people are information assets.

This notion makes it rather difficult to put a price on a company. People are now assets on a balance sheet because they can transfer information and add to existing information. The best way to picture this is that every employee has a nugget of information to give to each company. Each employee drops their nugget in the database with the others, but instead of forgetting it they are able to extract back out information. They take a look at all of the nuggets and add to them pool creating a new nugget. From the new knowledge someone else gains a new insight and then adds this information to the pool.

This type of relationship is what makes the employees so valuable to your company and to those companies of your suppliers and customers. This is the best reason why the Stockmarket has set record highs in recent years.

Investors know there is an X dimension to a company that does not show up on a balance sheet (Drucker, 1995). Future Implications of Supply Chain Management One of the changes that may occur is that employees could work at more than one place imparting information that they gain from other experiences. This takes consulting one step farther and hires workers out to the highest bidder.

Imagine sitting at home working for Pepsi and Coke at their same time developing new manufacturing techniques. The reason you could do this is because of telecommuting and one company does not necessarily know that you work for the other. There is nothing wrong with collecting two salaries for the same amount of knowledge. The value placed on the information that people gather and distribute will increase for the future. The most important business task done today is to collect and distribute information for your company that was gathered from your suppliers and customers.

Some other new ideas are to follow in Amazon. com" s footsteps and become a virtual storefront on the Internet. Some companies now use the Internet to control the total logistics of their operation from ordering to customer distribution. With the increased processing of information the customer has the ease of staying at home to make purchases. The new technology of the future brings so much more information to the table than in the past, with this increased amount of information people can make more informed choices in both purchasing and delivery (Coull and Rothman, 1993).

Drawbacks of Supply Chain Management With information technology providing today" s managers with literally thousands of pieces of information on one topic how do they still make the right choice? The final decision on a problem or project rests in the hands of the same person it did before all this information was so readily available. The problem is too much information. This problem leads to thinking too long about a project and the window of opportunity closes before your company has time to react. The decision-makers of the company have to sort vast amounts of information sifting through to find the pieces that are most useful to them.

Information overload is a very real problem with larger supplier and customer databases. The manager still makes the call, right or wrong on a decision. Hopefully they possess more information than in the past. One of the other problems with the Supply Chain is that when first put on the market it promised to reduce the number of workers there by increasing productivity. The problem is that Supply Chain Management has only displaced jobs and no real productivity gains show up in most sectors of the economy (Attewell, 1996). Other hindrances to Supply Chain Management include less face to face interaction.

This is a problem mostly on a sales side of the house. Companies are now on a Just In Time delivery system that brings their goods to the factories when they are ready to use them. The ordering process for this system uses Supply Chain values. What happens is that a buyer's inventory's records post on the supplier's system. They have a min. max. system in place telling the supplier when to ship the product. This definitely cuts down on the number

of people in business who come by to check inventory levels and see if you are ready to place another order.

With the new inter-plant communication people see less and less of their co–workers and supervisors. Telecommuting has also taken off for some companies. This method of work has very little face to face dialog. The customer may lose out as well; they do not receive the face to face support that they have know in the past with a particular product. Even know some companies do not answer your questions about a purchase with a real person a canned message is on a computer with options. This method of customer service is less expensive for companies so expect this trend to increase.

This problem is more one for Social scientist than for smart business operations. (Davidow, 1995) The final drawback is the value of your company. This is not only a problem for investors, but also when you go to borrow money. How do you determine the exact worth of the corporation? Earlier we learned that company now has more value placed on them than just the liquid assets. How does a lending institution loan money, certainly not on the value of people? They need hard assets to back up a loan. What we have is two different values of the same firm.

The problem comes when your market value far exceeds your lending value. The reason is that you may need a certain amount for a loan to stay competitive, yet because of hard asset value you can not afford it. The sale of more stock is an option, yet companies may not want to put themselves in

a position to have a hostile take over (Rayport and Sviokla, 1995). Conclusion As the technology of gathering and distributing information and supplies increases our business world faces problems. The positive aspects far outweigh the changes that companies will make to accommodate new Supply Chain assets.

Companies are currently getting on board the information technology train; this trend appears to continue in the future. Over the history of humanity there has never been a lack of need for information. The science of Supply Chain Management can either make or break business today based on utilization of the service. The company that remembers employees now play a major role in adding data to the information warehouse will reap large rewards. The personal uses of Supply Chains are still a bit behind the business world but still make home life a lot easier by paying the bills electronically.

The value system has a way of righting itself, so company values on both the market and in lenders' eyes will equal in the end. The best proof positive example that the use of Supply Chain Management works is with the U. S. automakers and the recent increases in market share they have seen. The turnaround owes its success to the faster processing of information, especially the desires of the customer. Supply Chain Management is the most important set of skills and tasks that a company has today.