Keiretsu Tetwork chain management analysis

Business, Management

A. Analyze whether a Keiretsu network, a virtual company, a vertical integration, or a different supply chain strategy should be adopted. A Keiretsu network is a network of businesses that own stakes in one another as a means of mutual security, especially in Japan, and usually including large manufacturers and their suppliers of raw materials and components. There are two types of keiretsu: vertical and horizontal. Vertical keiretsu illustrates the organization and relationships within a company, for example all factors of production of a certain product are connected.

A horizontal keiretsu shows relationships between entities and industries normally centered on a bank and trading company. The two are complexly woven together and self-sustain each other. A keiretsu network would not be a viable option for this small power tool company. A virtual company perspective, a virtual business will employ electronic means to transact business as opposed to a traditional brick and mortar business that relies on face to face transactions with physical documents and physical currency or credit.

In this context the company can use suppliers on an as needed basis a virtual onlineenvironmentwould be a worthy consideration for this company. Today however my concerns are where the sales markets of power tools are concerned it is found that customers like to touch and feel what they buy, due to that fact online sales for power tools are not very equitable.

However a company that provides a website to provide customer service for the products the company sells would be a good alternative to consider because it could possibly boosts sales through customer confidence in the

company’s products. Another alternative to consider involving using e-commerce would be to offer customized power tool products that are only available online and require a pre-ordering process. In the power tool market considering a virtual company only is not recommended however if adopted along with a vertical integration process it could be a viable avenue to pursue.

Vertical Integration, The degree to which a firm owns its upstream suppliers and its downstream buyers is referred to as vertical integration. Because it can have a significant impact on a business unit's position in its industry withrespectto cost, differentiation, and other strategic issues, the vertical scope of the company is an important consideration in corporate strategy. Expansion of activities downstream is referred to as forward integration, and expansion upstream is referred to as ackward integration. The concept of vertical integration can be visualized using the value chain. Considering the fact that the tool company’s products are made using an assembly process given this, it should implement backward integrating into intermediate manufacturing or forward integrating into distribution. There are two important issues that should be considered when deciding whether to vertically integrate your company and that is the cost and control factors.

The advantages to implementing vertical integration consists of the following; Reducing transportation costs if common ownership results in closer geographic proximity, Improves supply chain coordination, Provides more opportunities to differentiate by means of increased control over inputs, Captures upstream or downstream profit margins, Increases entry

barriers to potential competitors, for example, if the company can gain sole access to a scarce resource, Gains access to downstream distribution channels that otherwise would be inaccessible, Facilitates investment in highly specialized assets in which upstream or downstream players may be reluctant to invest, Leads to expansion of core competencies. (2) Today some of the benefits of vertical integration can be quite attractive to the company however there are some drawbacks that may negate any potential gains. Vertical integration potentially has the following disadvantages: Potential capacity balancing issues, The Company may need to build excess upstream capacity to ensure that its downstream operations have sufficient supply under all demand conditions.

There could be potentially higher costs due to low efficiencies resulting from lack of supplier competition. There could possibly be a decreased flexibility due to previous upstream or downstream investments. The company could incur a decreased ability to increase product variety if significant in house development is required. The process of developing new core competencies may compromise existing competencies. I believevertical integration is the best choice for the company given its type and the market conditions. I believe the tool company should adopt it, however constant monitoring of the discussed negative parameters should be done on a quarterly basis.

Discuss the metrics that should be used to measure performance of the supply chain. Supply Chain measurements or metrics such as Inventory Turns, Cycle Time, DPMO and Fill Rate are used to track supply chain performance. Supply chain management metrics can help you to understand

how your company is operating over a given period of time. Supply chain measurements can cover many areas including Procurement, Production, Distribution, Warehousing, Inventory, Transportation, and Customer Service any area of logistics. However having good performance in one part of the supply chain is not sufficient. Your supply chain is only as strong as its weakest link.

The solution is for you to focus on the key metrics in each area of your supply chain such as those specifically listed below. Inventory Turns (Inventory Turnover): The number of times that a company’s inventory cycles or turns over per year. It is one of the most commonly used Supply Chain Metrics. The calculation is a simple one; divide the annual cost of sales by the average inventory level. Example: Cost of Sales = $36, 000, 000. Average Inventory = $6, 000, 000. ($36, 000, 000 / $6, 000, 000) = 6 Inventory Turns. Inventory Turns can also be a moving number. Example: Rolling 12 Month Cost of Sales = $16, 000, 000. Current Inventory = $4, 000, 000 ($16, 000, 000 / $4, 000, 000) = 4 Inventory Turns.

Projected Inventory Turns: Divide the " Total Cost of 12 Month Sales Plan" by the " Total Cost of Goal Inventory" Example: The Total Cost of 12 Month Sales Plan is $40, 000, 000. Total Cost of Goal Inventory = $8, 000, 000. ($40, 000, 000 / $8, 000, 000) = 5 Projected Turns. Turns can be viewed using Cost Value, Retail Value, or even in Units. Although results vary by industry, typical manufacturing companies may have 6 inventory turns per year. Fill Rate definitions and calculations can vary greatly. In the broadest sense, Fill Rate calculates the service level between 2 parties. It is usually a

measure of shipping performance expressed as a percentage of the total order. Sample Fill Rate Metrics; Line Count Fill Rate, The amount of order lines shipped on the initial shipment versus the amount of lines ordered.

This measure may or may not take into consideration the requested delivery date. SKU Fill Rate; the number of Stock Keeping Units ordered and shipped is taken into consideration. Above, we consider each Order Line to have an equal value. Case Fill Rate; The amount of cases shipped on the initial shipment versus the amount of cases ordered. Value Fill Rate: Same as above, except the order line value is used instead of cases. (2) DPMO: Defects Per Million Opportunities DPMO is a Six Sigma calculation used to indicate the amount of defects in a process per one million opportunities. To calculate: Total Number of Defects / Total Number of Opportunities for a Defect. Then multiply the answer by 1 Million.

The challenge here is determining exactly what qualifies as a defect. Some defects can pass through a quality inspection and have little impact on the end product. Other defects can result in re-work or scrap. Six Sigma uses statistical analysis to measure a company’s performance by identifying defects in a manufacturing process. The goal of Six Sigma is to reduce process output variation to + or - three standard deviations. This results in no more than 3. 4 defects per million opportunities. Cycle Times you should consider for your supply chain. All of these measures should not only calculate the days or hours from the start and finish, but also between the various steps in between.

Customer Order Promised Cycle Time: The anticipated or agreed upon cycle time of a Purchase Order. It is gap between the purchase order creation date and the requested delivery date. This tells you the cycle time that you should expect. Customer Order Actual Cycle Time: The average time it takes to actually fill a customer’s purchase order. This measure can be viewed on an order or an order line level. The measure starts when the customer’s order is sent/received/entered. It is measured along its various steps of the order cycle. Manufacturing Cycle Time: Measured from the firm planned order until the final production is reported. It usually takes into account the original planned production quantity versus the actual production quantity.

Purchase Order Cycle Time: Measured from the creation of the purchase order to the receipt at your location distribution center, hub etc. One of the keys here is not having your requested delivery date exceed the agreed to lead time. On Time Performance metrics; On-Time Shipping Performance is a calculation of the number of Order Lines shipped on or before the Requested Ship Date versus the total number of Order Lines. Sample On-Time Metrics; On-Time Line Count: The amount of order lines shipped On-Time versus the amount of lines ordered. On-Time SKU Count: The number of SKU's (Stock Keeping Units) ordered and shipped is taken into consideration. On-Time Case Count: The amount of cases shipped On Time versus the amount of cases ordered.

On-Time Value Rate: Same as above, except the order line value is used instead of cases. The supply chain balanced scorecard tracks a limited number of key metrics. These metrics should be closely aligned to the

company’s strategic objectives. The measurements usually cover 4 areas: Financial, The cost of manufacturing, warehousing, transportation etc. Customer Order Fill Rate, Backorder Levels, On-Time Delivery, (Internal Business) Adherence-To-Plan, Forecast Error (Training): In house Training Hours, while the Balanced Scorecard approach was not specifically designed for the Supply Chain, it does provide guidance for your core measures. The central idea is to focus on key metrics that have real meaning to your company.

You don't want to get lost in a sea of numbers that don't really mean anything. The Balance Scorecard approach helps you to keep your measures aligned with your objectives. (3) Backorder: An unfilled customer order. A backorder is demand immediate or past due against an item whose current stock level is insufficient to satisfy demand. This calculation can vary. Some companies count items that are not confirmed not allocated and past the requested delivery date or requested ship date. Other companies may also count those items with stock confirmed, but past due. Backorders may be expressed in " pieces", " SKU's" or in " value". The backorder calculations are often tracked at a variety of levels.

Perfect Order Measurement: As with most other Supply Chain Metrics, there are many variations to this measurement. The perfect order measure calculates the error-free rate of each stage of a purchase order. This measure should capture every step in the life of an order. It measures the errors per order line. But how do you capture errors? Let's discuss what happens when an error occurs. Your warehouse picks and ships the wrong

item. Once the customer receives the order and notices the error, they contact the manufacturer and notify them of the mistake. The manufacturer then enters a credit for the item not shipped and an invoice for the item shipped in its place. In fact for almost all errors that occur, a corrective credit is issued.

It is through an analysis of these credits that you derive your metric. Most systems require a reason code to be used when entering a credit. Tracking these reason codes and assigning them to a category allow you to group them for the perfect order measure. Performance to Promise Dates: This is when a distributor places a purchase order against a manufacturer he has certain expectations on when he will receive the items ordered. His original expectation is the on-time delivery metric. However, the manufacturer may give him a revised estimate as to when they expect to fill the order. The manufacturers promise is called the performance to promise date metric.

Transportation Metrics: This metric is useful in businesses where units of measure are standard (e. g. , pounds). Most accounting systems can separate freight in and freight out. Percentage can vary with sales mix, but is an excellent indicator of the transportation financial performance. There are numerous metrics involved in a supply chain as you have seen here in this report I hope you have found it to be comprehensive yet precise in its explanation. Once you have a simple understanding of basic supply chain metrics, focus on a limited number of measurements that add value to the cause. Choose those metrics that will track your company’s true performance.

The text recommends picking 5 - 7 key measures per functional area. These measures are sometimes referred to as key performance indicators. Once you have identified these indicators, you can then set yourgoals. This will enable your company or department to track its performance to its set expectations. A. Discuss three significant issues that could complicate the development of an efficient, integrated supply chain. The first issue is local optimization, in this instance members of a supply chain are likely to focus on maximizing local profits in an effort to gain quick revenue or minimizing immediate cost based upon their limited knowledge of the market.

Slight upswings in demand are usually over compensated for because no one wants to be caught short of the door. In a related fashion slight downturns are over compensated for because no one wants to be caught carrying excess inventory and having to deal with the excess costs. So the end result is that supply chain fluctuations are often inflated. For example a biscuit company does not want to run out of biscuits for its retail customers during a special sale so it places an extra-large order, the natural response to an extra-large order from the retailer is to compensate with an even larger order to the manufacturer on the assumption that retail sales are picking up.

In this instance neither the distributor nor the manufacturer knows that the retailer had a one-time sales promotion that moved a lot of biscuits, this in turn complicated the implementation of efficient distribution. The Incentives issue, incentives push merchandise into the supply chain for sales that have not happened. This in turn generates fluctuations throughout the chain that is unfortunately costly to all its members. Once the incentives are withdrawn

it often becomes a costly stabilization process. Large lots, There is often a negative view when it comes to large lots because large lots tends to reduce unit costs. A logistics manager endeavors to ship large lots in full trucks on the other hand a production manager wants long production runs.

The implementation of both of these actions will drive down unit shipping and production costs but will fail to show actual sales and holding costs. These three factors contribute to distortions of information about what is really going on in the supply chain. The inaccurate information is most certainly unintentional but the resulting fluctuations and distortions will cause what is known as the bull-whip effect. The bull whip effect occurs when orders are relayed through the retailers to distributors to wholesalers to manufacturers with fluctuation increasing at every step in the sequence. This increases the cost associated with inventory, transportation, shipping and receiving and decreases customer service and profitability. D.

Recommend concepts and methods for effective management in an integrated supply chain. A supply chain is a network that includes vendors of raw materials, plants that transform those materials into useful products, and distribution centers to get those products to customers. In the effort to coordinate the overall supply chain system each organization in the network has its own agenda and operates independently from the others. However, such an unmanaged network results in inefficiencies a plant may have the goal of maximizing through input in order to lower unit costs. If the end demand seen by the distribution system does not achieve this through input, there will be an accumulation of inventory.

The following is a discussion of several concepts and methods needed for effective management in a supply chain. Accurate Pull data are generated by sharing point of sales commonly referred to as (POS) data they do so that each member of the chain can effectively schedule, they couple this with computer assisted ordering referred to as CAO. This implies using POS systems that collect sales data and then adjusting that data for market factors, inventory on hand and outstanding orders. Then a net order is sent directly to the supplier who is responsible for maintaining the finished goods inventory. Implementing effective lot size reductions, lot sizes are only reduced through aggressive management.

The process should include developing economical shipments of less than truckload lots and providing discounts based on total annual volume rather than size of individual shipments, creating processes to reduce the cost of ordering, through technics such as standing orders and various forms of electronic ordering. Another method for effective management is the single stage control of replenishment, it means designating a member of the chain who is responsible for monitoring and managing inventory in the supply chain based on the pull from the end user. This approach removes distorted information and multiple forecasts that create the bull-whip effect.

The method of vendor managed inventory (VMI) is afamilyof business models in which the buyer of a product provides certain information to a supplier of that product and the supplier takes fullresponsibilityfor maintaining an agreed inventory of the material, usually at the buyer's consumption location usually a store. A third party logistics provider can also be involved to make

sure that the buyer has the required level of inventory by adjusting the demand and supply gaps. VMI makes it less likely that a business will unintentionally become out of stock of a good and reduces inventory in the supply chain. The concept of Collaborative Planning, Forecasting and Replenishment (CPFR) is a concept that aims to enhance supply chain integration by supporting and assisting joint practices. CPFR seeks cooperative management of inventory through joint visibility and replenishment of products throughout the supply chain.

Information shared between suppliers and retailers aids in planning and satisfying customer demands through a supportive system of shared information. This allows for continuous updating of inventory and upcoming requirements, making the end-to-end supply chain process more efficient. Efficiency is created through the decrease expenditures for merchandising, inventory, logistics, and transportation across all trading partners. (2) The method of a blanket order it is defined as an order the customer makes with its supplier which contains multiple delivery dates scheduled over a period of time, sometimes at predetermined prices. It is normally used when there is a recurring need for expendable goods.

Items are typically purchased under a single purchase order (P. O) rather than processing a separate P. O. each time supplies are needed. Having a blanket order dispenses the customer from holding large inventories and avoids the administrative expense of processing frequent purchase orders, while favoring discount pricing through volume commitments. The process of standardization, the purchasing department of a company should make

special efforts to increase levels of standardization. Rather than acquiring a variety of similar products with labeling, coloring, packaging or perhaps slightly different engineering specs, the purchasing agent should try to have those products standardized.

Another effective supply chain management method is called Postponement, this is a business strategy that maximizes possible benefit and minimizes risk by delaying further investment into a product or service until the last possible moment. An example of this strategy is Dell Computers' build-to-order online store. Another supply chain management method is called Drop shipping, this is a supply chain management technique in which the retailer does not keep goods in stock, but instead transfers customer orders and shipment details to either the manufacturer or a wholesaler, who then ships the goods directly to the customer. As in all retail businesses, the retailers make their profit on the difference between the wholesale and retail price.

A pass through facility process in supply chain management is a distribution center where merchandise is held but it functions less as a holding area and more like a shipping hub these facilities often run by logistics vendors use the latesttechnologyand automated systems to expedite orders. The process of Channel Assembly is the extension of the pass through facility it sends individual components through instead of finished products to the distributor the distributor then assembles tests and ships. Channel assembly treats distributors more like manufacturing partners than distributors. This technique has been proven effective in products that are undergoing rapid change such as cell phones and computers. In this strategy finished goods

inventories are reduced because units are built to a shorter more accurate forecast, market response is better with a lower investment.

The technology of E-procurement also known as supplier exchange is the business-to-business or business-to-consumer or Business-to-government purchase and sale of supplies, Work and services through the Internet as well as other information and networking systems, such as Electronic Data Interchange and Enterprise Resource Planning. Typically, e-procurement Web sites allow qualified and registered users to look for buyers or sellers of goods and services. Depending on the approach, buyers or sellers may specify costs or invite bids. Transactions can be initiated and completed. Ongoing purchases may qualify customers for volume discounts or special offers. E-procurement software may make it possible to automate some buying and selling. Companies participating expect to be able to control parts inventories more effectively, reduce purchasing agent overhead, and improve manufacturing cycles.

Inventory ABC Classification is a method used to categorize and group your products. This method will allow you to identify the small amount of products that usually account for most of your sales dollars. . E. Explain the actions that should be taken to mitigate one possible risk for each of the following areas: E1. Process Risk The area of supply chain process risk involves raw material and component availability, quality and logistics. To reduce process risk the company should consider planning the supply chain in advance because lack of preparation is a key factor in supply chain collapse. The company should endeavor to develop independently owned supply plants in

order to keep ransportation costs and handling times low, this process also will result in keeping customer service levels above average and quality standards at high levels. Another viable strategy is to develop a global network of outstanding suppliers in order to provide the lowest cost and to provide the highest possible standards. The company should also place extensive controls that should be done by a reputable third party auditor on the supplier processes and logistics. In order to continually mitigate the process risk the company needs to continually monitor these activities to ensure that all system links are running to desired specifications or above. E2. Control Risk

The area involving control risk according to encompasses management metrics, reliable secure communications for financial transactions, product designs and logistics scheduling. To mitigate thecommunicationcontrol risk a company can implement a highly advanced communications network to transmit engineering scheduling and logistics data to its main facilities and the suppliers of its components for production. E3. Environmental Risk The possible environmental risks are customs duties, tariffs, security screenings, natural disasters, currency fluctuations, terrorist attacks, and political issues. The ways to mitigate environmental risks when political and cultural values are the main problems is by franchising and licensing rather than owning.

To reduce the risk associated with natural disaster the company should incorporate a policy that haves more than one supplier for its components. F. Recommend a functional organizational structure for the manufacturing facility As you may know, there are three main types of organizational

structure: functional structure, divisional structure and matrix structure. Each structure has its own strong and weak points. I recommend the company implement a functional organizational structure based upon its small product line and its single production facility among other lesser concerns. I believe this is the correct approach to consider given that functional structure works best for organizations that only produce a few products.

One of its main advantages is that employees within functional departments are highly specialized and thus are very skilled and knowledgeable. Another advantage is that with functional structure, it's easy to accomplish functional goals specific to certain departments, such as reaching $1 million in sales, increasing production speed by 6 percent, or allocating resources more effectively. A functional organizational structure consists of an executive officer and his staff, along with functional managers and their departments, such as: sales, accounting, manufacturing, service, delivery and others. A functional organization usually has the chief executive officer as its head.

Some organizations have one or more vice presidents who report to the CEO. Various department managers, such as thefinancemanager, sales manager, production manager, and marketing manager report to the CEO or to a vice president. The staff within the functional departments report to their managers. The company in adopting this approach will create a stable organizational structure for its manufacturing facility. F1. Discuss organizational components that should be included in the operations function There are six components of organizational structure to consider

and when combined form the backbone from which companies' operations are built.

The first component Reporting Relationships, contrasts the lines of authority within an organization, setting out in fact who is responsible for overseeing which regions, business units, departments and work teams. The process of clearly setting forth who reports to who in an organization can often help to improve operational efficiency and reduce decision making time. The second component, Grouping of Employees, is a formal structure that lays out how employees are grouped and where they are physically located. In a functional structure, employees performing work in the same department, such as accounting or marketing, should be located in close proximity to each other. The third component, Controlling information and decision flows, determines how information and decision making authority flows in the organization.

Decisions and information can be made at the top levels of an organization and passed down through the ranks. Specific operational decisions may also be made at lower levels of an organization, and then reported back up to the higher levels. The fourth component, Constructing layers of management, organizations can be structured to be relatively flat, meaning there are fewer layers of management, or relatively tall. Taller or flatter organizational structures are better and suited to different types of businesses. The fifth component, the organization chart is the simple act of putting your organizational structure down on paper or on a computer using an organization chart can help you to visualize and analyze your structure.

The organization chart is a vital element of organizational structure it is the tool which managers use to plan, control and assess their structure it can be a vital element in a functional structure. The sixth component, The advancement track, this can provide a road map for internal advancement, companies can create solidcareerpaths that begin with entry level positions on the bottom of the organization chart and through the advancement track move up one step at a time. G. Discuss the strategic operations management decisions that would support the implementation of the firm’s mission and strategy. The process of implementing the firm’s mission and strategy requires that we look at strategic operations management decisions that focus on product differentiation, high quality, low cost on-time delivery and flexibility.

This process can only be achieved when operations managers strive to make effective decision in critical areas of operation management. One of the strategic operation management critical decisions is product and design decision. Design products and services affect much of the transformation process they determine the costs of operations as well the quality. Ad-choices of products and services an organization has to develop product design strategies in line with market changes as the product life cycle so as to sustain market share in the industry. Next is location selection decision the location selection is crucial for the company’s success this decision influences costs such as transportation cost, logistic cost and rent as well as human resource in the area.

Process and layout design is also a critical decision that has to be made selecting the right processes and making decisions on appropriate process and layouts strategies often affect the managements decision to use specific technology and types of processes with suitable layouts, and to also procure resources and to develop maintenance strategies. An organization has to make the right decision on capacity needs, manpower requirements, purchasing decisions, and inventory need requirements all these affect the processes and layout decisions because processes and materials must be located in relations to each other. Besides that, aggregate planning decisions are required on forecast demand, production or capacity strategies and demand strategies or maintain level production strategies so as to meet the market demands.

In addition, an organization has to develop a workable and efficient production schedule; the demand on human resources and facilities must be determined and controlled. The process of making the right scheduling decisions enable jobs or products or services to be delivered to customers on time and within scheduled datelines. As we are aware of people can be a complicated part of the total work system, proper division of jobs, work methods and work measurements must be decided by the organization to ensure the quality of work life. The right decision has to be made on quality strategies so as to remain centered on customer focus and to develop quality policies and quality objectives quality process strategies and a quality management system that yield excellent quality products, processes and services.

Inventory decisions can be optimized only when customer orders, production schedules and human resource planning are considered. An organization has to plan for its inventory management system for its finished products, as well as its raw materials and work in progress. The manager also has to make decisions whether to carry out preventive maintenance or breakdown maintenance as it incurs maintenance costs. To do this, an organization has to decide on its desired levels of reliability, stability and maintenance costs. In summary these strategic operations management critical decisions are crucial to determine the company’s success in order to fulfill the company’s goals and missions.

Only by making proper and logical decisions and reviewing those actions on timely basis to ensure that the decisions are appropriate for the current condition will the company be able to pass all problems and hassles in the future of its operations management. G1. Discuss whether the company should adopt a consumer-focused mass customization process. Mass customization refers to a customer co-design process of products and services which meet the needs of each individual customer with regard to certain product features. All operations are performed within a fixed solution space characterized by a stable but still flexible and responsive manufacturing process. As a result, the costs associated with mass customization will allow for a price level that does not imply a switch in an upper market segment.

The mass customization practice shows that consumers are frequently willing to pay a price premium for customization to reflect the increment of

utility they gain from a product that better fits to their needs than the best standard product attainable but mass customization goods are still targeting the same market segment that was purchasing the standard goods before. The process of craft customization is related to price premiums of such an extent that it targets a completely different market segment. The premiums of mass customization offerings may be substantial but have to be still affordable. Given these facts the company could consider such a process given that the market involving power tools supports such a strategy.

Work cells could easily be created to support this process and the manufacturing processes could be adapted quite easily to allow for the customization of the product line. However these orders would have to be placed in advance because mass customization of any product line can be a costly venture, back stocking of customized products would be a very risky venture and should be avoided. H1. Recommend actions to improve cost effectiveness for the following: Manufacturing facility. Manufacturing facility- Today many manufacturing firms have started outsourcing manufacturing because the costs to produce the products in the United States are too expensive or the cost to hire employees is too expensive. When you are focusing on cutting costs, outsourcing manufacturing is one of the best ways to do it.

Specific actions are needed to manage quality, when it comes to running a successful manufacturing company managing quality is vital to your business. The demand for better quality is continuing to grow in every industry. You must have a system in place to manage quality in order to

meet your customer's demands and to make sure they are truly satisfied with their products. Since just about every industry is driven by the customer, you must be able to focus on their needs and find a way to keep them satisfied with your products and services. Specific actions are needed involving maintenance and manufacturing, maintenance of the machines that keep production running. This is always a concern and a priority for manufacturers.

The undeniable fact for manufacturing businesses is that keeping repair costs low, can only be done through regular maintenance. The bottom line is that if the tools, computers, vehicles, and anything else used for manufacturing are maintained better, they last longer. It is important to understand that regular maintenance incurs lower repair costs. Ignoring maintenance of the tools, machines, vehicles etc. that are used will cost you more in the long run simply because you are looking at much more wear and tear. While there are some tools, vehicles, and machines, that require a maintenance program, there are also times that whether there is a requirement for maintenance or not, you will still want to keep the maintenance up.

Considering lean manufacturing processes, Traditional manufacturing processes can work for some companies. Other organizations have found that traditional manufacturing methods are plagued with a number of problems and it leaves their company with a higher defect ratio along with reduced employee morale and productivity. This is why so many organizations have turned to lean manufacturing. Lean manufacturing first

got its start in the manufacturing industry. It is one of the best ways to increase productivity and focus on generating higher profits for your company. Today many companies turn to lean manufacturing to helping them improve the way their company is currently being run.

Actions to improve inventory control methods in manufacturing are crucial; one of the biggest threats to any business is waste. This is especially true in the manufacturing business. Waste creates large problems for the production process, and it results in higher costs to both customer and the manufacturer. It also takes more time and energy, and it tends to be hard on the environment. Coupled with the problem of waste for many manufacturers is inventory control. Problems with inventory can be fatal for a business, and especially a manufacturer. Inventory control becomes a huge issue when you don't have the right item for your customer when they come to claim it.

Having either too much or too little, when it comes to inventory could completely destroy your business. The key to success for any manufacturing business is to exercise some inventory control. Businesses need to learn how to order and maintain their inventories, so that they are adequate to the business's needs, but never too large. Inventories also need to change with changing demands. If a product becomes suddenly more popular than others, your business needs to order more, and know how many to order. (2) The Kaizen system was invented in Japan and developed by the Toyota production system as a way to improve your company by reducing or eliminating wastes and increasing efficiency.

Lean manufacturing uses the principle of kaizen to help improve manufacturing facilities all over the world. When you hear the word kaizen, you may also hear the phrase kaizen events. This is referring to the focus on teamwork to solve problems within the organization. The various kaizen events are business opportunities that allow you to change the way you work. There are parts of kaizen events that reduce production such as cycle time, speed, waste, and many other issues. Identifying the kaizen issues will allow you to build a stronger manufacturing plant and help to reduce wastes. The process starts by picking a team. This team will be responsible for identifying the various kaizen events and finding solutions for them.

Generally a kaizen team will have about 7 people or less. They will spend all of their time seeking out the kaizen events until they are all identified. Then they will spend their time focusing on how to fix the kaizen events and build a successful and stronger organization. The team you choose needs to have various personalities and individuals that work in different departments. This way you will have greater knowledge about the overall organization in the group and it will be easier to improve lead time and other issues. The reason to determine kaizen events is so you can focus on significant improvement. When you research more into kaizen, you will find the phrase " to reduce waste" in there.

As you can see, you want to combine the purpose of kaizen with your mission and come up with a great way to reduce waste and focus on building a stronger company. Kaizen is a new way to conduct business in an organized manner. Using the various procedures and tasks of kaizen you will

see how the company comes together as a team and how you each have various jobs that each need to be changed in their own way until everything within the company is standardized. When a process is standardized, it is much easier to keep people on track. If you don't have standardized procedures, it is too easy for employees to fall back into old habits that may be leaving your company with excess waste in the first place.

The actions needed involving picking the right manufacturing process is also a crucial decision when it comes to picking a manufacturing process, you need to assess your company and your needs. The SMED method stands for single minute exchange of die, when you implement this you will focus on quick changeover rates. Your focus will be on fixing wasted time within the company and you want to produce products faster and focus on increasing efficiency throughout the organization. The goal is to reduce the time it takes to change over one product on one line to another product on another line. Increasing demand for the products can lead to greater life cycles and when you focus on SMED you will reduce inventory so you don't have wastedmoneyand space.

Another popular method is to turn to the 5 S method, This method focusing on reducing wastes within the company as you will get rid of all the unnecessary equipment and steps your employees need to take in order to do their jobs effectively. The 5 S method allows you to organize the company better in order to make your employees become efficient and productive with their jobs. Six Sigma developed in the manufacturing industry is one of the most popular ways to improve your company. This will focus on reducing

your error ratio to a defect ratio of 3. 4 per million units produced. As you reduce the number of product defects and errors that are produced within the company, you will have an efficient and effective organization. (3) Another popular process is lean manufacturing because it focuses on the reduction of waste and the increase of overall production and efficiency.

You must rely on your employees heavily with lean manufacturing as it is more than just principles you are implementing, it is also a mindset change on the employee’s behalf. Lean manufacturing has several different things you can implement each of which allows for you to focus on strengthening your company and boosting morale. Some of them include using visual control tools and organization methods that make the company run effectively and make the overall organization more productive and efficient. Line Balancing, is another manufacturing process you can use, with line balancing you will focus on reducing waste, line balancing is commonly used in service industries as it is a flexible way to focus on fixing the problems within the company.

Line balancing is about adding value to the company within your particular job description. Many times companies will combine jobs to make everything more effective and efficient and to help reduce waste and make employee morale go up. The process of value stream mapping is a great option for service industries as employees will become productive within their particular job segments as they are focused on certain things like return of goods, production of goods, and so on, with value stream mapping you will have a standardized process as to how the company is to be run and you will

be able to create a decision-flow program that allows for standardized operations.

Business Process Improvement (BPI) is a method that is used when a business is looking to simplify and streamline processes. BPI is designed to help businesses understand how to simplify processes, in order to make them cost effective. This also helps businesses find ways to reduce their excess waste, and build a stronger reputation for the company. There are 3 main parts of business process improvement. These parts are having the end result produce the desired results, significantly reducing costs and materials that are used to produce products. Using a process capable of changing to fit the needs of the customers and the business, BPI focuses on changing the overall performance of a business, rather than small things.

Instead of correcting errors and constantly monitoring employees, the method will remove things that could be causing problems. The end result is to become a customer driven manufacturing business that looks for ways to simplify processes that include hiring quality employees that can help the company reduce variations. The specific actions needed to reduce product defects should be looked upon heavily by the company and manufacturing facility. The number one goal of any manufacturer is to reduce product defects, and improve profitability. There are a number of ways that you can do this. It is important to realize that reducing product defects, needs to come from within the business that is creating the product.

Utilizing Six Sigma or some other process improvement strategies can help you eliminate product defects. There are many benefits to reducing product

defects, it will help to increase productivity; costs will lower and it will help the business save money. | H2. Recommend actions to improve cost effectiveness for the following: 2. Supply Chain. References Meredith, Jack R. , and Scott M. Shafer. Operations Management for MBAs. 2nd ed. New York: John Wiley & Sons Inc. , 2002. Stevenson, William J. Production/Operations Management. 8th ed. Boston: Irwin/McGraw-Hill, 2005. Heizer, Jay and Barry Render. Operations Management. 10th ed. Prentice Hall, 2011. Retrieved from http://wpscms. pearsoncmg. com