

Valkyrie case study

Education



Valkyrie Lighting is facing a new challenge within its current operations. This challenge comes in the form of expanding and improving its current supply chain management system. In this new implementation, the Valkyrie management team will need to incorporate three vital concepts to achieve success in the highly competitive market of technical lighting. With this new supply chain management focus, Valkyrie will experience many issues that will need to be addressed to minimize the time it takes to get its expanded supply chain up and flowing smoothly.

A number of the issues that Valkyrie experiences can be summarized into three main issues that are currently holding up Valkyrie's success in this new endeavor. The main issues that Valkyrie faces include: product accessibility, limited communications, and current barriers to its global expansion strategy. With this new focus on supply chain management, Valkyrie must decide between implementation of a production line within Sunshine Product's facility, or establish a legal binding agreement with Sunshine Products to act as their sole supplier.

Currently there is a lack of an integrated computer system that prohibits both Valkyrie and Sunshine to adequately respond to each other's product demand needs. Due to communication being vital to any business's success, Valkyrie must look to integrate with Sunshine products to improve communications and information sharing to combat inventory issues and spikes in customer demands. Due to increasing competition within the technical lighting industry, Valkyrie has the opportunity to expand its operations throughout two potentially lucrative markets.

Valkyrie must analyze the Southeast Asian market and the European market; the two primary global opportunities. Both options have advantages and disadvantages; which Valkyrie must analyze to achieve global success. Our first recommendation is to establish a legal agreement with Sunshine Products to become our sole supplier. The second recommendation is to establish an integrated computer system between Valkyrie and Sunshine. Our final recommendation is to focus on entry into the European market through a third party contractor.

These recommendations will allow Valkyrie to maximize its supply chain, effectively communicate between all supply members and expand its market share; while maintaining its core competency of producing aesthetically designed lighting products. Company Overview Valkyrie Lighting is a manufacturing company with operations mainly in North America. The company's primary focus is the production and delivery of technologically advanced industrial lighting. Valkyrie Lighting operates in a supply chain with many tiers working together to create a product that serve a number of customers.

The majority of their parts come from tier-one suppliers, such as Sunshine Products, that are sent to a manufacturing plant in Denver. In this plant, the products are assembled, stored, and delivered to customers who place orders. The tier-one suppliers contract the manufacturing of parts from tier-two suppliers that are located throughout the world; such as Sunshine Products who contracts in Taiwan. Valkyrie Lighting gained market share in the technical lighting industry due to integrating advanced technology which was superior to the competition.

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This technology led to the creation of superior products and the ability to create custom products that serve different customer needs. Valkyrie Lighting also held a competitive edge with the product design and looks that were more desired than that of the competition. This is currently Valkyrie Lighting's main competitive edge in the industry. Valkyrie Lighting's operations are based on a push system that follows forecasts which are revised every quarter. This push system has led the company to produce in batch processes.

The constant demand from customers for unique designs requires that Valkyrie Lighting create a certain amount of one product, then switch to create another similar product with minor design differences. The type of operations performed at the Denver plant is completed in two stages. The first stage represents a repetitive operation because the core pieces of the product are assembled by workers to complete only the technical assembly. There are eight different basic assemblies that are created and then the product is moved to the second stage.

The second stage is considered more intermittent because the basic assembled products are then finished to customer style preferences and is the source of the variety among customers. Once the product has been completed, the product is stored into stock located in the Denver plant and shipped based on customer orders. This operation represents a make-to-stock strategy where the product is produced based from forecasts; which are held as inventory until the customer demands a product. Valkyrie Lighting is in an industry that was highly competitive until a few major companies dominated the majority of the market.

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The technical lighting industry is a slow-growing market where the order winners are based on superior technology, product variety, and timely delivery. Pricing and customer service are important factors in maintaining the competitive edge along with having advanced technology. The main trend in this market is the moving away from standard designs and being flexible to create a number of products that serve different needs based from the customer. This is important for any company in this industry because the market consist of primarily of large buyers that could have a significant impact on the market share a company possesses.

Currently Valkyrie and two other firms control the majority of the market share. The current market that Valkyrie Lighting operates in is the North American market. This is where Valkyrie operates strongly and is the most competitive. Other markets of interest include Europe, Southeast Asia, and Latin America. Each market has its own unique situations and barriers that affect Valkyrie Lighting. Currently, Valkyrie Lighting is taking advantage of the European market by exporting from the USA through a Dutch distributor, but future growth and market power will require manufacturing and distribution in Europe rather than exporting directly from the USA. The Southeast Asian market is difficult because of the strong competition among Asian companies and their ability to provide low costs, a core priority that Valkyrie cannot deliver at this time. The Latin American market is still untouched by Valkyrie Lighting and no long-term operation plans have been developed. Valkyrie Lighting has many strengths with the current operation model.

Their technology is strong enough that they can create a number of superior products and make custom changes to satisfy the customer demands. This is important because the market demands that companies have a wide variety of products to meet customer preferences. Another strength of Valkyrie Lighting is the aesthetics of their products. In the technical lighting industry, products need to be unique and Valkyrie Lighting achieved success by getting their products put into trade shows. This led to a strong following and more business. Another main strength for Valkyrie Lighting and their operation design is the make-to-stock.

With customers demanding that companies hold products until orders are placed, Valkyrie Lighting continues to deliver customer satisfaction and is flexible. Despite some of the strengths of the current operations, Valkyrie Lighting's current operation model contains many disadvantages. One of the biggest disadvantages is that the company is erratic with delivery times. Because the company continues to use a push system and quarterly forecast, they cannot handle on-time delivery for large orders or higher than expected orders from their larger customers.

Valkyrie Lighting has tried to offset this problem by using the make-to-stock process, but this leads to the company holding onto large amounts of inventory that is costly to the company and uses space in the Denver plant. Another disadvantage Valkyrie Lighting faces is the lack of a standard line of communication among the different tiers of suppliers. The suppliers use different forecasts and rely on a push-system. Valkyrie Lighting utilizes a forecast that does not anticipate last-minute changes in demand and this leads to erratic delivery times to customers.

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Valkyrie's communication technology is not compatible with its suppliers, which leads to a lack of closeness in communication. These issues affect the supply chain with suppliers running out of materials, Valkyrie Lighting not producing enough products, and customers waiting longer to receive orders. The last issue Valkyrie Lighting is faced with is penetrating new markets in different countries. With the lack of solid communication in the supply chain and the inability to deliver just-in-time, Valkyrie Lighting faces issues in setting up operations in Southeast Asia.

Because the company does not directly operate in Asia, it cannot compete with the local firms that can provide products at a lower price. In Europe, Valkyrie Lighting understands their current operation is short-term. To continue to grow and expand market share; Valkyrie understands they must consider expansion into the global market. Current Problems: Although the business has been an industry leader and successful in the past, the Valkyrie management team is challenged to improve their supply chain management as they move forward. This project, supply chain management, is a new concept to Valkyrie.

Although the management team has little experience in supply chain management, Rob Brown is confident that his team members are up for the challenge as they all have a stake in the survival and prosperity of the business. The team comes together in this project with various expertise and qualifications, which will allow them to face many challenges that are to come. These challenges range from decisions that will ultimately change Valkyrie's way of doing business, and quite possibly even the entire technical

lighting industry. This will require a new way of thinking and managing to remain successful as they move forward.

Valkyrie is currently in a highly competitive industry where until recently there were very few major innovations. Valkyrie moved early to gain a competitive advantage. With this shift to improving their supply chain management, Valkyrie must act in the best interest of its stakeholders, which includes: owners, suppliers, manufacturers, vendors, employees, customers and the competition. Valkyrie must be methodical about the procedures it takes as they need to remain true to their core competency of providing superior technically advanced products with an aesthetic design, which is their top advantage over the competition.

Before moving forward too quickly, Valkyrie must identify current problems and potential supply chain hindrances to minimize the frequency of false starts, fully utilize its capacities, and maximize productivity to ensure their product is still a viable and desirable choice for its end users. Major goals that Valkyrie seeks to achieve are to provide better delivery times to their customers, maintain well designed aesthetic products, and regain market share that has been lost due to price wars of the industry's customers. There are three problems that Valkyrie needs to address initially in order to make their supply chain successful.

The first problem Valkyrie must address is its current relationship with Sunshine Products. Sunshine plays a significant role in Valkyrie's success because of its unique technology. Sunshine provides components to Valkyrie, but due to Sunshine's production planning procedures, Valkyrie is unable to

increase order quantities in fear that Sunshine is operating near capacity. Valkyrie and Sunshine's current relationship is solid, but informal. Brown, as leader of this project, needs to identify that an informal relationship will hinder his attempts to make the supply chain management successful.

Brown needs to look for ways to work jointly with Sunshine in hopes of making Sunshine their sole supplier. A sole supplier relationship will help Sunshine with inventory issues, inventory planning and production forecasts. In today's business world, the internet is a very useful tool and virtually has very few limitations. Currently, Valkyrie and Sunshine do not have a compatible system, which hinders planning, inventories, and production plans. Both businesses plan production based on their inventory and production schedules, and Sunshine operates on a two-month planning horizon.

This current system does not provide either company flexibility with production runs and prohibits them from accommodating spikes in product demand. If this is not resolved, the companies may experience the bull-whip effect and implore tactics that will lead to excess inventories. Valkyrie and Sunshine need to share an integrated system which allows visuals on both companies inventory and re-order points. By addressing the first two problems, Valkyrie will enable itself to take on its major competition by streamlining its components and production plans.

To remain competitive, Valkyrie must improve lead times and flexibility to meet market demands. In addition, with the demand possibly stretching globally, Valkyrie needs to determine their expansion strategy based on

which markets are most lucrative. The two possible markets that are promising to Valkyrie at this time are the European and Southeast Asia markets. By expanding to one or both of these markets, Valkyrie will be able to change its marketing and sales strategy from a push concept to a pull system due to the ability to fill orders upon the ever changing demands of their product.

Valkyrie has alternatives to choose from to resolve these three major issues. By solving these issues first, Valkyrie sets itself up for success. Issue 1: Product Accessibility To better understand the problem with Sunshine, we will first look at the present situation. Sunshine serves two other customers in non-competing fields other than Valkyrie and its production facility operates near capacity. The informal relationship between Valkyrie and Sunshine is sufficient when the two companies' managers adhere to their hand-shake commitment and no competitor steps in.

As Valkyrie loses ground in the U. S. market to its two major competitors, Valkyrie's priority level in Sunshine may not remain if demand drops. Once the company engages in overseas production, Sunshine will not be able to manufacture the additional needed components under the current terms and Valkyrie may need to develop new suppliers. It is obvious continuing with the current informal handshake agreement is not an option for Valkyrie and Sunshine in the long run. In addition, as Valkyrie is exploring market expansion, this action will further necessitate an improved supply chain with Sunshine.

Two possible solutions are:

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- Alternative 1: Place a dedicated production line in Sunshine's production plant.
- Alternative 2: Negotiate a formal contract with Sunshine and make it Valkyrie's sole supplier. Both proposals will be analyzed in terms of feasibility, cost, and benefit in the section below.
- Alternative 3: Dedicated Production Line Proposal A dedicated production line proposal suggests Valkyrie place a dedicated production line in Sunshine's facility. The production line will be provided by Sunshine and paid for by Valkyrie, as it will be exclusively used for Valkyrie's production needs.

The benefit of a dedicated production line is Valkyrie will have flexibility in its production planning and a just-in-time system can be implemented. The new line will provide extra capacity to satisfy Valkyrie's increasing production need. Production equipment will not be a problem for the dedicated production line proposal since Sunshine either has enough room or it could expand its plant. All costs that occur during the setup of the production line will be covered by Valkyrie. The real problem is in the production and management of the dedicated line.

Who should be responsible for the new line? How should wages and pricing be determined? If Sunshine were to provide the front line production workers and administration, they may charge a price premium. An agreement with Sunshine will need to be established for Valkyrie to ensure the dedicated line in Sunshine's facility will become the priority. Formal Contract and sole supplier Proposal Compared to the dedicated production line, a formal

contract is simpler and easier to implement. The contract needs to address the concept of sole supplier and the external factory.

By creating a formal contractual relationship with Sunshine, Valkyrie guarantees Sunshine will be its sole supplier. In this contract, Sunshine will need to adjust its production planning procedure to make Valkyrie's demand their first priority. A formal contract also builds up long-term relationship between the two companies rather than the two managers. With a formal contract, Sunshine becomes a guaranteed service provider. The benefit of such a relationship is information sharing, which is vital to the success of supply chain management.

With an open information flow system, Sunshine can respond to production changes faster and reduce lead time. Another benefit of contractual agreement is it provides greater incentive for continuous quality improvement, which benefits both Valkyrie and Sunshine. The most important benefit of a formal contract is the elimination of uncertainty, the risk of losing a strategic partner. Recommendation The absence of a formal contract between Valkyrie and Sunshine places a huge risk on Valkyrie's long-term success.

With its unique technology, Sunshine plays a critical role in Valkyrie's supply chain. It is clear that Valkyrie needs to include Sunshine in order to implement improvements in the supply chain. Considering both proposals' pros and cons, we determine that a dedicated production line is neither feasible nor cost effective. The formal contract and external factory proposal fit into the supply chain management requirement and is much easier to

implement. Thus, the formal contract and external factory proposal is recommended.

The Lack of Computer Integration System

Communication is the key to any business's success. Due to Sunshine's resistance to computer integration, both companies are experiencing communication problems. An integrated system will increase the productivity of the companies' information systems, order entry and production system. Information Systems Information systems play a prominent role in any company's supply chain. Valkyrie needs to share data, such as purchase orders, invoices, and payments, along with information about common information and financial records with all chain members.

Sharing systems speeds up the flow of materials, payments and information. It allows companies to reduce the effort and cost of processing such transactions, and enables all members of the supply chain to know expected completion dates and availability of the products. Sharing a computer system allows all members to know when demand changes from the forecast. Any problems encountered that affect availability quantity or delivery time of the products allows the chain members to respond to problems and react to meet delivery commitments.

Sharing information, analyzing market feedback and trends between chain members is critical to be successful in today's dynamic global market. Order Entry Many companies and retailers are using Electronic Data Interchange (EDI) and/or Point-Of-Sale (POS) systems because it is very convenient for buyers and sellers. By using EDI, the form of computer-to-computer

communication is standardized to share business documents such as invoices, purchase orders, shipping bills and product stocking numbers. This helps both buyers and sellers reduce logistical and labor costs and get products to market faster.

For example, when suppliers transmit an advance shipment notice to the company for each inbound shipment, EDI systems can be effectively implemented. This notice provides a purchase order number, vendor identification number, product identification number and carton counts for each item in the shipment. The EDI data flows directly from the suppliers' computers into companies and retailer's warehouse management system. With this information, Valkyrie's distribution center can anticipate inbound volume, prepare for receiving, and schedule the appropriate number of warehouse workers.

EDI advanced shipment notification is sent from a shipper to a receiver with detailed information about the contents of the shipment. The process mentioned above also eliminates the need to schedule and stage the shipment later, which saves on labor costs. Through the EDI system, suppliers get paid accurately and on time. Furthermore, EDI can eliminate order batching. Companies typically use large order batching because of the relatively high cost of placing an order. Supply chain partners can reduce ordering cost by using electronic data interchange to transmit information.

Lower ordering costs eliminate the need for batch order. Similarly, when the retailers use Point of Sale (POS) systems, the information collected by POS allows both Valkyrie and Sunshine to know the product demand information

when making replenishment decisions. In addition, EDI and POS are very helpful to counteract the bullwhip effect of erratic replenishment of orders placed on different levels in the supply chain that have no apparent link to final customer demand, and as a result, manufacturers inventory does not coincide with demand. Production system

By integrating the two companies' computer systems and sharing relevant databases, Valkyrie and Sunshine Product can both benefit with a production system that determines what is needed, how much is needed and when it is needed. From Valkyrie's standpoint, having its orders completed and shipped to the distribution center on time is the vital to maintain customer satisfaction and market share. From Sunshine's view point, switching from traditional system-push system to a pull system would be a good strategy because it reduces inventory on production and materials.

Thus, it helps Sunshine Product to solve the problem on material shortages or production planning system. The disadvantage of combining two companies' computer system is that data exchange might create some problems in payment process or information flows between two companies. This computer integration also requires the internal consistency and discipline to ensure the process is integrated and information flows accuracy, otherwise it will create errors that bring problems to both companies in the short-run.

The Entry to the Global Market

At the core of Valkyrie's global corporate strategy is the need to make a significant lucrative entry into the global market. Rapid expansion into a

segment of the global market will make up for the mature market conditions in North America. Alternative 1: The Southeast Asian Market Southeast Asia is identified as a promising market but this market does not share the need for Valkryie's unique, aesthetic design element. Valkryie's technical lead is already being eroded by Alpha products, leaving only the aesthetic design advantage which is not an order winner in Southeast Asia.

Valkyrie has an opportunity to leverage the relationship with Sunshine's established contract manufacturing in Taiwan. This liaison could transition into an opportunity to pursue moving into the Southeast Asia market. Valkyrie will have to establish its own communication and control systems to monitor their third party. They will need to monitor and evaluate the third party's level of customer service, the efficiency of their operations and inventory investment.

The European Market. Valkyrie's main competitive advantage is their design element known to be essential to market success in Europe. By moving into the European market, Valkyrie will be able to get a faster response to new customers, provide better service and increase market share. This solution requires learning about the European market and the European custom rules. Profits will be higher and Valkyrie will not suffer a loss of control which might result in poor market performance as opposed to simply licensing in Europe. This alternative helps overcome high fix cost and high tariff duties.

A third party contractor will have a European market awareness of customer's product needs and will be knowledgeable about the competition. The third party contractor would understand the customer service

requirements which vary considerably from northern to southern Europe and will assume the responsibility for providing communications. A third party contractor can be counted on to know their local market's suppliers capabilities and performance. As these other suppliers are less critical to Valkyrie's success than Sunshine, they could be substituted if they do not perform to standards.

Recommendation Our recommendation is for Valkyrie to establish local production, under Valkyrie's name, by contracting with a third party to manufacture and distribute in Europe. The justification for choosing the European market is this market will require a unique styling of lighting products which is Valkyrie's primary competitive advantage and core competency. This design element is essential to Valkyrie's market success in the European market. The commitment to this strategic plan would negate an entry into the Asian market at this time.

The third party contractor will need to be an experienced operator who can handle both the manufacturing and distribution. As Sunshine Products will be contractually bound as a single source supplier, their Taiwan plant will transmit orders electronically to the third party contractor who will work with regional suppliers to provide the remainder of the components. Factors to consider when identifying potential third party contractors will include: the company's ability to partner with Sunshine Products, the ability to identify regional suppliers to provide the remainder of the component parts and the facility's proximity to customers.

The European single point distribution system will be essentially parallel to the US market. In order to meet product demand and service requirements Valkyrie knows that a single point distribution system and negotiating service contracts with carriers to provide distribution is effective. The company knows from experience at their Denver location that deliveries can be made to most major markets even by surface carriers.

Conclusion

Valkyrie Lighting is venturing into new but potentially lucrative concepts. This new supply chain management will allow Valkyrie to remain competitive in the highly competitive technical lighting industry. By focusing on members of the supply chain, Valkyrie can utilize its resources to compliment its current strengths in creating better business relationships with its supply chain members. To ensure that Valkyrie succeeds in this new endeavor, there must be a formal contract between Valkyrie and Sunshine to ensure that Valkyrie's demand will be met. Playing into the success is also the implementation of a integrated computer system between its supply chain members.

This allows all members of the supply chain to readily see the inventories that are needed to sustain, while minimizing the bullwhip effect. Finally, Valkyrie must focus on its core competency, by manufacturing products that are preferred for the aesthetic design. This focus is one that suggests that expanding into the European market should be the sole focus at the current time. By following our three recommendations, Valkyrie will improve product accessibility, improve communications within the supply chain and increase market share with expansion into the European market.