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Customer Analysis Overview

Power Sports
Manufacturer

SERIGRAPH
3801 E. Decorah Road
West Bend, WI 53095

www.serigraph.com
Telephone: (262)335-7200



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Business Impact

- ✓ Revenue
- ✓ Cost Savings
- ✓ Productivity

Business Description

This company is the second largest automotive manufacturer and distributor in Asia, the largest motorcycle producer in the world and is tied for first in production of ATV's and UTVs (290,000 per year). The UTV/ATV's they manufacture are designed to be used for both pleasure and work.

Its larger automotive parent has been plagued by uncharacteristic quality issues. Because ATV revenues are closely tied to the brand, the quality issues that have beset the automotive division could easily have a negative impact on ATV sales. As a result, the company has made it an imperative to deliver top-quality ATVs to preserve the brand's image.

With manufacturing plants across the globe, and a vast vendor network that collaborates on every product offering, the company has an extremely complex supply chain - which makes it vulnerable to costly disruption and downtime.

On average, manufacturing assemblers experience 700 hours of production downtime per year with a *minimum cost of \$22,000 per minute*. According to a 2005 Advanced Technology Services, Inc. (ATS) [press release](#):

“In a survey of 101 manufacturing executives in the automotive industry, from parts suppliers to engine makers to automakers, a majority say the cost of stopped production is incredibly high - an average \$22,000 per minute. A majority also say they would outsource production machine maintenance as a way to make their factories run better. The research was commissioned by Advanced Technology Services, Inc. (ATS) and conducted by Nielsen Research.

While one minute of stopped production, or downtime, costs an average of \$22,000, some survey respondents cite the figure to be as high as \$50,000 per minute. With such high costs at stake, keeping production machinery operating smoothly is critical to a factory's bottom line.”

And presumably, the cost has risen in the 10 years since this survey was conducted.

Despite the fact that its automotive division is under fire because its quality is in question, the company's ATV division continues to maintain an image of quality and attain year-over-year growth. This is because it delivers on its marketing promise of Improving Quality and Best in Class Customer Service. Continued superior supply chain

execution is critical to this manufacturer's continued ability to deliver quality and best-in-class service at a competitive price.

Critical Business Issues

- ✓ Numerous SKUs and configurations create complexity
- ✓ Supply chain disruptions can cause quality problems, downtime and cost overruns
- ✓ Complex supply chain, high number of vendors
- ✓ JIT (Just-In-Time) manufacturing lowers cost but increases risk of production disruption
- ✓ Sporadic ordering practices increase risk of production stoppages
- ✓ Quality and delivery issues in sister divisions tarnish the brand
- ✓ Insufficient resilience in supply chain creates risk

Results

Smooth supply chain execution and continuous improvement relative to supplier costs and delivery have become primary goals for both the industry and the company. To this end, ACR (Annual Cost Reduction) is a key company initiative, and every supplier must participate. Specifically, suppliers are asked to review and improve processes, eliminate inefficiencies and share their savings. Each supplier is expected to contribute an ACR of 3%.

Serigraph's relationship with this manufacturer is built on a true supply chain partnership that creates agility and contingent scale/capability, delivered through an "on-call" model.



...fruitful relationship since 1999 providing everything we need. If there is something they can't make, they work well with designers...work well with deadlines. [Serigraph] is over-the-top with delivery and their timeliness.

- Serigraph Customer

The Cost of Downtime

Every minute of lost production means lost profit. As minutes tick by, the production that should have been is gone forever, and with it, the profit that would have been provided. If that lost time grows into hours, monthly financial performance is seriously compromised. The cost of downtime goes beyond lost profits to the total wasted cost of running the operation, plus stop-start losses and other consequential costs. As previously reported, the cost of downtime in the industry is minimally \$22,000 per minute!



Our operations work around the clock and it can sell everything that it can make at a fair price, the last thing you want happening is for your plant to go down.

- Serigraph Customer

Downtime increases costs such as:

- ✓ Equipment rental
- ✓ Overtime pay to make up for lost productivity
- ✓ Extra shipping costs and delivery surcharges
- ✓ Frequent and/or long system outages which tarnish the company's image (as it did in its automotive division) in the minds of customers and investors
- ✓ Adverse effect on the company's stock price
- ✓ Eroded revenue due to loss of customer goodwill
- ✓ Campaigns to explain and apologize for lack of service

The True Cost of Supply Chain Disruptions

This manufacturer is using a Just-In-Time manufacturing model. If a product is late or quality is poor, the result might be production line shut down.

As previously indicated, its production facility operates 24/7/365. During first and second shift, there are 500 employees working per shift producing over 70 vehicles per hour – that's 560 ATVs per shift. One hour of lost production represents lost sales throughout the sales network of \$375,830 (\$70 x \$5,369). And eight hours represents over \$3M in lost sales.

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Then there's the average fully burdened rate of the production worker (\$25 per hour). If a supply chain disruption takes those employees off-line, the costs are high. But the direct labor costs are dwarfed by the entire system downtime costs. Using the lowest per minute industry cost estimate (\$22,000/minute), the company loses \$1.32 million for every hour of downtime. The average assembler experiences over 700 hours of downtime per year. That puts the total cost of annual downtime on average at \$924m per year.

So one form of cost reduction is to never be the supplier that creates production downtime. With the size of this operation (pictured below), it's easy to see how costs would become a major concern if production stoppages were to occur.



The Added Value of a Serigraph Relationship

In the ATV sector, resilient supply chain management is based on partnerships that implement on-the-ground solutions. These are not the transactional buyer-vendor relationships of old. They are more akin to a marriage.

This manufacturer embraces the idea of partnering to develop an innovative continuous improvement plan, backed up with the cost trade-off business case. This type of relationship allows creative ideas to flow.

Serigraph works closely with this customer on product design and development. It introduces ideas that enhance the brand and create market-differentiating solutions. For example, Serigraph recently proposed a solution to eliminate the aluminum warning label which had to be riveted to the product's bumper as part of the manufacturing process. The proposed solution, an in-mold label (IML), will replace the aluminum tag. This solution will eliminate a supplier from the supply chain, reduce complexity and lower costs by eliminating one full-time employee during two of the three shifts in each 24-hour production day. **The saving are a significant \$146,000 per year** [8 (hours) x 2 (one FTE for two shifts) \$25 (fully burdened avg. hourly cost) x 365 (production days/year)].

“

Sometimes our systems will mess up and we won't send an order. [Serigraph has responded so quickly] they got our products into production the next day.

- Serigraph Customer

As a long-time supplier to this company, Serigraph has worked on projects both large and small. It is recognized as one of the most reliable vendors within the massive network, working tirelessly to ensure the company gets what it needs, when it needs it, even on short notice. **And it has a history of significantly reducing costs by “getting the company out of jams” on a regular basis.** For example, the manufacturer needed a two-day turnaround on a Serigraph part with a normal lead time of two weeks. Serigraph “worked the part into the production schedule and delivered in two days.” This enabled the manufacturer to get its shipments out as scheduled.

In fact, Serigraph hasn't been responsible for a single production line shut down in over three years. To put this into perspective, the average supplier shuts the production line down several times per year, at significant cost.

Serigraph incorporates the “lean” philosophy into everything they do. This supports a culture of continuous improvement and customer service. In addition, the company works closely with its customers to meet their goals. The relationship that it has with this ATV manufacturer is a model for the industry to emulate. It shows the positive effect on cost, quality and flow delivery that occurs when companies share savings derived from the identification and eradication of inefficiencies.

“

Their expertise, knowledge and willingness to work with our designers solves problems.

- Serigraph Customer

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Serigraph does a very good job of contributing to the quality of [our] brand.

- Serigraph Customer

Metrics

- ✓ Preserve the brand's image through contribution to quality and customer service
- ✓ Eliminate supply chain disruptions—cost avoidance (2-day shipment eliminates plant shutdowns which is a cost avoidance of \$1.32M per hour; \$10.56M per 8 hour shift and \$3m in lost network sales per shift)
- ✓ Reduce overall cost [Most reliable supplier- top ACR (annual cost reduction) contributor]
- ✓ Take place of multiple vendors—collapse supply chain by eliminating multiple vendors
- ✓ IML replacement of aluminum warning tag will eventually save \$146,000 [8 (hours) x 2 (one FTE for two shifts) \$25 (fully burdened avg. hourly cost) x 365 (production days/year)]