Memorandum

To: Wriston Manufacturing Corporation
From: Richard Sullivan (Gabriel Lim Be-Vern 76032135)
Subject: What to do with the Detroit Plant
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Overview

The future of the HED's[1] flagship Detroit plant (Detroit) has been called into question. With declining sales for it's parent company the WMC[2], there has been increasing focus on HED to perform.

This memo will outline the root causes for the failure of the Detroit and will look to provide recommendations for management.

Issues

Operational Inefficiency

Based on Exhibit A, we can see that Detroit has the highest number of product lines (3), product families (20) and product models (120). The high degree of variability has led to a poor return on assets (ROA) and poor sales.

From Exhibit B, we can see that there is a product and process mismatch for Detroit[3]. Machinery is laid out by function, commitment to flexibility and

[1] Heavy equipment division
[2] Wriston Manufacturing Corporation

prototyping shows Detroit is a job shop. Rather a batch process should be used, this has led to operational inefficiencies exhibited by poor sales per employee and a high burden rate (Exhibit A).

Lack of Investment

At WMC plants are measured in silos for profitability, this has led to the downfall of Detroit. Once products at Detroit have reached high volumes they have been transferred to other plants. This has created a vicious circle whereby Detroit has poor operational efficiency due to high variance and of developing prototypes. Once products reach high volume and efficiency it is passed on to other factories increasing the profitability of other factories' operations. This method of accountability is flawed as other plants are benefitting from Detroit's expense.

Within WMC plants fight for resources with the allocation of capital prioritized for profitable plants. Detroit has not been able to compete for investments as it has performed poorly and it manufacturers low volume and dying products. This has led to a lack of new machine tools essential for production, with the average age of machines in Detroit at 33.1 years old versus HED's average of 15.9 years old.

Human Resource

[3] Being further from the diagonal line implies a mismatch and operational inefficiency

With the expectation of Detroit's closure looming and the lack of investment funds pumped into the plant its workers have suffered. This has led to high absenteeism, high turnover, lack of motivation and low output per employee. Furthermore, the stigma attached with being a worker at Detroit would be hard to shake off and the culture of lack of accountability has seeped into every worker.

Options

The options that management can take over a five-year horizon:

1. Close Detroit down

This would involve selling off the Detroit plant and firing the employees. Based on the capacity of other plants, Lancaster has been identified to absorb Group 1 products, Lima will absorb Group 2 products and Group 3 products will be discontinued. This option yields the highest NPV (Exhibit 3).

However, the NPV value fails to identify how the transfer of products will impact Lancaster's and Lima's overheads. Detroit's products are low volume and more varied which would not suit these plants' processes resulting in operational inefficiencies. Furthermore, there would be a loss of customers from the discontinuation of products.

2. Invest in Detroit

By reinvesting in Detroit, there is a negative NPV (Exhibit 3). Detroit would be able to sustain itself for another 5 to 10 years, and it would cost $2 million per year to re-tool. However, the profitability of Detroit would remain the same in spite of the investment.

3. Build a new plant

Building a new plant also has a negative NPV (Exhibit 3), even though cashflows would increase by $3 million a year it is not sufficient to off-set the investment incurred. Even in year 10, there would still be a negative NPV or negative $2 million.

Recommendations

The best course of action would be a delayed version of Option 1: Close Detroit Down. Rather than close it down immediately, the plant should be closed down over a period of 3 to 5 years to allow for time to tie up the following loose ends:

Impact On Other Plants

The closure of Detroit will have a domino effect on the rest of the plants under HED. The first step would be to transfer Saginaw's production to Lima. Lima has excess capacity and is a high volume plant. It would be able to take Saginaw's work load while Saginaw is a medium volume plant it would be more suited to absorb Detroit's lower volume and more varied products. A 3 to 5 year period

would assist in the transition as employees get acquainted with the new products.

Lancaster will absorb Group 2 products from Detroit as well as the prototyping responsibilities. Being a new plant, with state of the art facilities this plant would be the most conducive environment to create new prototypes. Furthermore, as it has high capacity and new technology it would also be the best plant to bring these products to fruition.

Human Resources

Employees will be told well in advance of the pending closure of plant. Rather then sacking them, employees should be competing for jobs at Saginaw and Lancaster. With an increase in production at both of these plants there would be jobs available. The senior level employees have time to train the junior employees within this three year period. Furthermore, by not having to terminate these employees $6 million can be saved in termination costs. It also, removes the need to pursue hiring once the transfer has occurred.

Customers

With delay in the closure of the plant, customers have ample notice. This would help to maintain customer relationships built. Sales can also attempt to cross-sell other products in HED's suite. By delaying the time to closure we can try to keep WMC's customers satisfied.

Accountability and Investment Policy

Plants should not be looked as in silos, from profitability to cultural levels. As these plants are not mutually exclusive as we've seen from Detroit. Rather accounting and investment policy making decisions should be looked at from a HED perspective. There needs to be a change here as Lancaster will be taking on the burden of prototyping and should not be punished for the benefit of WMC as a whole.