

Capsim Simulation Broad Differentiation Strategy

In the Capsim simulation course at Georgian Court University, Lakewood, NJ in summer session 2012, there are six companies are: Andrews, Baldwin, Chester, Digby, Eire and Ferris (Computer). The industry simulation is the sensor industry. The first round ends December 31, 2013. The teams will play six rounds in the simulation. In this simulation there are the following modules: Research and Development; Marketing, Production and Finance. The Human Resources Module will be added in the third round. The teams played two practice rounds before beginning the actual competition. In the practice rounds the individual companies get an idea of the strategy performed by the other teams and the computer team Ferris. This will help each company develop a strategy for the competition.

There are six basic team strategies listed on page 24 in the Capstone Team Member Guide 2012. These strategies are Broad Cost Leader; **Broad Differentiation**; Niche Cost Leader (Low Technology); Niche Differentiation (High Technology); Cost Leader with Product Lifecycle Focus and Differentiation with Product Lifecycle Focus

One basic strategy is **Broad Differentiation**. In order for this strategy to work a company has to be aware of what the competition is doing every round. Let us begin with the **Research and Development Module**. We shall use team Erie as an example.

Erie Company has to implement a plan to upgrade the performance, size and Mean Time before Failure (MTBF) of its products. Erie keys off of the **Industry Conditions Report** Performance and Size Centers for each round listed for the following segments: Traditional-Eat; Low End-Ebb; High End-Echo; Performance-Edge and Size-Eat. Erie should keep their revision dates before July 1 of the current round. In this manner Erie will have a better product than most of the other companies for the second half of each round (year). These revisions change the Age at Revision for each segment. In the Traditional and Low End segments the age of the product can be older. In the High End, Performance and Size segments customers want new and better products. When the round is complete Erie can compare the segment performance and size coordinates with the other companies' segments in the **Capstone Courier**. Erie must analyze what the other companies have done with their segments. Erie makes improvements for each product to beat the competition in all five segments for the next round.

In the **Marketing Module** Erie must improve the price of segment products round by round. The prices of products are reduced by \$0.50 each year. It is best for Erie to price products at a mid-range in order to be competitive. Note that Erie may be able to charge a better price for the High-End, Performance and Size products but the Traditional and Low-End products have to have a more modest price. At the end of the round, Erie can do a comparison price check against the other companies' products in the Capstone Courier. The promotion and sales budgets should be in the mid pricing range. Erie must make a comparison to see what the other companies are promoting. This Broad Differentiation Strategy only works if Erie compares its segment products to the other teams' products and adjusts pricing, promotion and sales.

This is a rule of thumb when making a Sales Forecast. There are actual market share units listed in the Capstone Courier. Each Industry segment makes up a percent of the market. All five segments: Traditional, Low, High, Performance and Size equals 100%. Let's take the Traditional segment which has industry unit sales of 7,387,000 units or 32.4% of the market in round zero. We have six teams in the simulation: Andrews, Baldwin, Chester, Digby, Erie and Ferris. Erie should divide the 7,387,000 units by 6 and make a prediction that Erie will sell approximately 1,231,167 units. Erie uses this basic calculation for the other product segments.

In the **Production Module Schedule** the sales forecast carries over to the Unit Sales Forecast. Under the Unit Sales Forecast is the Inventory on Hand. Erie must adjust the Production Schedule for Traditional-Eat to equal 1,231,161 units. The number 1,231 is placed in the box. The computer will then calculate the unit Production after Adjustment. Erie does this calculation for the rest of the segment products: Low-Ebb, High-Echo, Performance-Ebb and Size-Egg. Note that the highest to lowest market share in units in the competition is Low End, Traditional, High End, Size and Performance. Even though High, Size and Performance sell fewer units these segments sell at higher prices.

In the **Production Margins Area** we have listed the total unit cost and contribution margins. Although the Capstone Team Member Guide recommends a 30% contribution margin in each segment, this is very hard to accomplish during competitive rounds. A rule of thumb is to keep the contribution margin above 25%. This makes it easier to adjust to what the other companies are doing. Erie may be able to increase the contribution margin in some of the other segments but an average of 25% contribution margin in all segments is pretty good.

In the **Physical Plant Section**, Erie wants to make sure they have enough 1st shift capacity not to pay overtime to employees. It may be necessary to increase automation gradually over the rounds of the competition. Automation costs money but a small increase in automation, 0.3 per year may be enough to stay competitive. Erie must check in the Capstone Courier to see which teams are automating. This is a competition and Erie has to adjust to the marketplace.

In the **Workforce complement** a second shift is not added until the first shift reaches its needed complement.

In the **Finance Module**, as a basic rule of thumb keep accounts receivable at 30 days lag and accounts payable at 30 days lag. In the Pro Forma Income Statement make sure each product has a net profit. If a company overestimates sales or spends too much money, current debt may increase. The computer will automatically give a company a BIG AL LOAN and the vig (interest) is 7.5%.

In the real world companies buy back stock. Less stock on the open market will increase the price per share of the company's stock. When you sell stock in the marketplace this will decrease the price per share of your company's stock. When a company pays back bonds the company's S&P rating will improve. In the computer simulation I would recommend not to buy back stock unless your company has a great over surplus of funds.

A final note, this is a competition among teams. The only way to improve your company's performance is to analyze what the other teams are doing each round and make adjustments for all modules.