

Capsim Simulation: Beware of a Recession

During the competitive rounds of the Capstone Course within the Capsim Simulation a Recession is most likely programmed for the fourth or fifth round. Teams may get caught in an economic down draft and over produce in the individual product segments. A company/team must remember that there is a 12% carrying cost for inventory.

In the Capstone (Capsim simulation) Course at Georgian Court University, Lakewood, NJ in summer session 2012, there are six companies: Andrews, Baldwin, Chester, Digby, Erie and Ferris (Computer). The industry simulation is the sensor industry. The teams play six rounds in the simulation. At the beginning of the third round the modules are: Research and Development; Marketing, Production, Finance and Human Resources.

In the Capstone Courier, students must review segment analysis for: Traditional, Low End, High End, Performance and Size. The teams analyze Next Year's Segment Growth Rate to make a unit sales forecast. Note that we have moderate to high growth rates for all segments in Round 1, Round 2 and Round 3. Therefore the teams/companies stock out of products. The teams/companies must make comparisons of the top products in each sensor segment.

On page 22 of the Capstone Team Member Guide for Year 2012, the text explains sales forecasts and worst case/best case scenarios.

It is up to an individual company to make their sales forecast. A conservative method mentioned in a previous lesson is to take the Total Industry Unit Demand or Actual Industry Unit Sales and divide that number by the six companies in the competition. If the Traditional Segment has unit sales of 9,000,000 divide this by 6 and a team's sales forecast, (Andrews for example) is 1,500,000. Place inside the Marketing Module Unit Sales Forecast box [1500]. This [1500] carries over to the Production Module Unit Sales Forecast box [1500]. If there are 100,000 units or [100] units in the Inventory on Hand box take [1500] minus [100] and your Production Schedule box displays [1400] or 1,400,000 Traditional Units for Andrews' product Able.

A more aggressive method is to take into account Next Year's Segment Growth Rate. If there is a 10.0% growth rate for the Traditional Segment, Andrews can make the following forecast. Multiply 10.0% times 9,000,000 units and you get 900,000 units. Add these together and next year's total industry sales demand will be 9,900,000 units. Divide 9,900,000 by 6 teams and Andrews' forecast for the Traditional Product Able will be 1,650,000 or [1650] in the unit sales forecast box. Remember your company must analyze top products sold in the segment. The other teams may present better products. One team may have a better product by performance, size, MTBF and age. Another team may pay more money for the Promotional Budget increasing Customer Awareness. Or a team may spend money on an increased Sales Budget affecting Customer Accessibility.

Andrews can take an intermediate approach to the sales forecast. Take half of the 10.0% for Next Year's Segment Growth Rate. This would be 5.0%. Andrews makes its sales forecast by multiplying 5.0% times 9,000,000 units which equals 450,000 units. Add the 450,000 units to 9,000,000 and you get 9,450,000 units. Divide 9,450,000 units by 6 teams and Andrews' unit sales forecast for Traditional Product Able is 1,575,000 units or [1575] in the unit sales forecast box.

The teams must be careful after completion of Round 3. Most teams have had stock outs in various sensor segments because of increased growth within the industry. By the end of Round 3 teams/companies have spent money on increased capacity in certain segments. A few teams may

have invested in automation to decrease labor costs. For Round 4 the companies must check Next Year's Segment Growth Rate in the segment analysis pages of the Capstone Courier. This is when a **RECESSION** may occur.

For the Traditional Segment in Round 4, Next Year's Segment Growth Rate may be a **negative 12.0%** or **-12.0%**. Let's say there were Actual Industry Unit Sales of 9,600,000 units in the Traditional Segment in Round 3. Multiply 12.0% times 9,600,000 and get 1,152,000. Because this is a **negative growth rate**, subtract the 1,152,000 units from 9,600,000 and you have 8,448,000 units (9,600,000 minus 1,152,000 = 8,448,000). Andrews makes its sales forecast for Traditional Product Able, 8,448,000 units divided by 6 teams equals 1,408,000 units. Then Andrews' places [1408] in the Marketing Unit Sales Forecast box which carries over to the Production Unit Sales Forecast Box. A company can make strategic modifications to the sales forecast dependent upon the other teams' top products performers in an individual segment.

If a team overproduces they will have decreased profits. If there is inventory of 1,000,000 units multiply this by the 12.0% carrying cost. This equals a \$120,000 cost for carrying the inventory. If there is inventory in all five sensor segments that totals 5,000,000 units, you multiply the 5,000,000 units by 12.0% and the carrying cost will be \$614,400.

Beware of a Recession in the Capsim Simulation. A team that is doing well can really get slammed if they do not check the Capstone Courier and Next Year's Segment Growth for all sensor segments.