CAPSTONE® COST LEADER WITH A PRODUCT LIFECYCLE FOCUS

This practice exercise will help you understand the relationships between business strategy, tactics, functional alignment, and the Capstone® simulation. We will use the Andrews Company for this example. (During the practice rounds, each company is assigned a different strategy.)

You will execute your plan by inputting the decisions described below. At the same time, your competitors will execute their assigned plans. The practice exercise will take three rounds As each round is processed, you will evaluate the results and then input the next round's assigned decisions.

Upon completion of the practice rounds, the simulation will be reset to the beginning. You can then create and implement your own strategic plan for the actual competition.

Executive Summary

We will adopt a Cost Leader with a Product Lifecycle Focus strategy, concentrating on the High End, Traditional, and Low End segments. We will gain a competitive advantage by keeping R&D costs, production costs, and material costs to a minimum. This will allow us to compete on the basis of price. Our "product Lifecycle" focus will enable us to reap sales for many years on each new product we introduce into the High End segment. Products will begin their lives in the High End, mature into Traditional, and finish as Low End products before they are retired and their assets sold.

Vision Statement

Reliable products for mainstream customers: Andrews brands offer value. Our primary stakeholders are bondholders, stockholders, customers, and management.

Research And Development (R & D)

We will introduce a new High End product every two years and retire our Low End product when it becomes obsolete (falls outside the Low End segment circle). We will gradually phase-out our Performance and Size segment products (Aft and Agape). We will ultimately have a steady stream of products lined up along the High End, Traditional, and Low End segments.

Marketing

We will maintain awareness and accessibility in our targeted segments. After we establish our cost leadership position we will revisit our situation to decide whether sales and promotion budgets should be reduced or if we should keep pace with our competitors. Our prices will be lower than average for those segments. Our Performance and Size segment products (Aft and Agape) will be priced at the top of the expected range and we will discontinue advertising & sales budgets as we retire these products.

Our prices will be lower than average.

Production

We will significantly increase automation levels on products we intend to keep for more than three years (High End, Adam and Traditional, Able) and spend the money necessary to set– up highly automated plants for our new products as they are launched. We will sell off the plants for our Performance and Size segment products (Aft and Agape) over the next three years.

Finance

We will finance our investments primarily through long-term bond issues, supplementing with stock offerings on an as needed basis. When our cash position allows, we will establish a dividend policy and begin to retire stock. We are not adverse to leverage, and expect to keep debt/equity (Leverage) between 2.0 and 3.0.

PRACTICE ROUND 1

Follow the decisions below. After the practice rounds are complete and the competition rounds begin, you are free to choose a different strategy; you are not obligated to continue as a Cost Leader with a Product Lifecycle Focus.

R & D Round 1

Able – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material cost. Example: Increase Able's performance by 0.1 and reduce MTBF by 1000 hours.

Acre – Leave positioning alone, which will allow the product to age further. Reduce reliability (MTBF) to reduce material cost. Example: Reduce Acre's MTBF by 1000 hours.

Adam – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material cost. Example: Reduce Adam's size by 0.1, and reduce MTBF by 1000 hours.

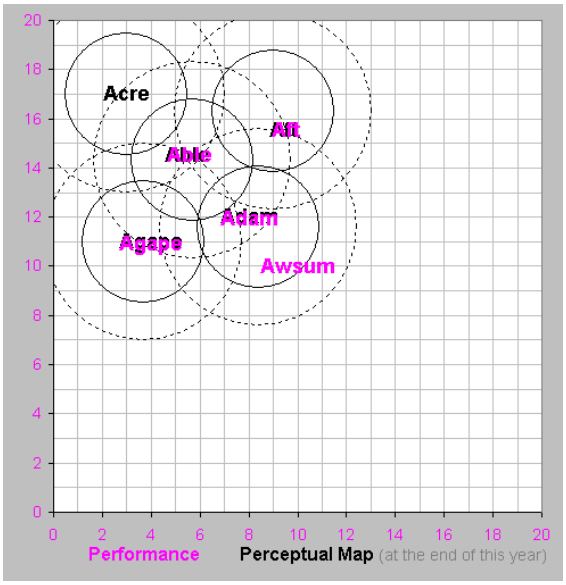
Aft – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material costs. Example: Increase Aft's performance by 0.1 and reduce MTBF by 1000 hours.

Agape – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material costs. Example: Reduce Agape's size by 0.1, and reduce MTBF by 1000 hours.

New Product: Launch a new High End product, with a project length less than 2 years (no later than December of next year). Example: Name: Awsum (replace the first NA in the list), positioned at the leading edge of High End segment, try a performance 10.0, a size of 10.0 and a minimum acceptable High End reliability (MTBF) of 20000.

Important: Under the rules of the simulation, the names of all new products must have the same first letter as the name of the company.

Important: With the exception of the new product, make certain that the projects complete during this year before December 31st. Under the rules, a new project can only begin on January 1st. If these projects do not complete before the end of this year, you cannot begin follow-up projects next year.



Perceptual Map from the Research & Development Spreadsheet: Product names in black indicate the product's current location, names in magenta indicate the product's revised position (with slight revisions, the names will overlap). Names of newly invented products appear in magenta.

Marketing Round 1

Able – Make a moderate cut in price. Maintain promotion, and sales budgets. Forecast sales higher sales over last year, driven by an improved age and price cut. Example: Price $27.50, promotion budget $1000, sales budget $1000, and sales forecast 1500.

Acre – Make a moderate cut in price. Make moderate increases in promotion and sales budgets. Forecast moderate unit sales declines as competitors might introduce aggressive price cuts. Example: Price $20.50, promotion budget $1000, sales budget $1000, and sales forecast 1700.

Adam – Make a moderate cut in price. Make moderate increases in promotion and sales budgets. Forecast a moderate increase in unit sales. Example: Price $37.50, promotion budget $1000, sales budget $1000, sales forecast 450.

Aft – Increase price, cut promo and sales budgets. Forecast a moderate decrease in unit sales. Example: Price $34.50, promotion budget $400, sales budget $400, sales forecast 350.

Agape – Increase price, cut promo and sales budgets. Forecast a moderate decrease in unit sales. Example: Price $34.50, promotion budget $400, sales budget $400, sales forecast 330.

Important: We will price and market Awsum during the year in which it begins production.

Production Round 1

Production schedules will plan for eight weeks of inventory. That is, have enough inventory on hand to meet demand eight weeks beyond the sales forecast. This requires a 15% inventory cushion (8/52 = 0.15). For example, suppose Marketing forecasts demand at 1000, and you have 100 units in inventory. You want 1000 x 115% = 1150 available for sale. Since you have 100 on hand, you would schedule 1050 for production.

If you cannot meet demand, sales go to competitors. Therefore, you want to plan for the upside as well as the downside. Your proforma balance sheet will forecast about eight weeks of inventory. You hope that your actual sales will fall between your sales forecast and the number of units available for sale.

For each product, schedule production using the formula:

(Unit Sales Forecast X 1.15) - Inventory On Hand.

Able – Increase automation level by 1.0 or 2.0 units.

Acre – Make no changes in plant capacity or automation.

Adam – Increase automation level by 2.0 or 3.0 units.

Aft – Sell 250,000 units of capacity by entering -250 in the Buy Sell Capacity cell.

Agape – Sell 250,000 units of capacity by entering -250 in the Buy Sell Capacity cell.

For your new product, do not buy capacity this year. Wait until next year.

Important: There is a one year lag between purchase and use of new capacity and automation for both new and existing products.

Finance Round 1

Your fiscal policies should maintain adequate working capital reserves to avoid a liquidity crisis. Working capital can be thought of as the money that you need to operate day-to-day. In Capstone® working capital is current assets (cash + accounts receivable + inventory) - current liabilities (accounts payable + current debt). If you run out of cash because your sales are unexpectedly weak, an Emergency Loan will be issued.

Here are some guidelines to help you avoid an Emergency Loan. Your proforma balance sheet predicts your financial condition at the end of this year. Make conservative sales forecasts. Do not rely on the computer prediction. Override it with a forecast of your own. If you are conservative, it is unlikely that your worst expectations will be exceeded. Next, build additional inventory beyond your conservative expectations. This forces your proforma balance sheet to predict a future where your sales forecast comes true and you are left with inventory. (If you sell the inventory, that's wonderful.) On the Finance spreadsheet, issue stock, bonds or current debt until the December 31 Cash Position for the upcoming year equals at least five percent of your assets, as displayed on the proforma balance sheet. This creates an additional reserve for those times when your worst expectations are exceeded and disaster strikes.

As you gain experience with managing your working capital, you will observe that the guidelines above make you somewhat "liquid," and you may wish to tighten your policy by reducing cash and inventory projections. That is fine. The better your marketing forecasts, the less working capital you will require.

Match your plant investment with a long-term bond. If you do not have sufficient new bond debt capacity, issue stock to cover the shortfall.

Pay a dividend between $0.50 and $1.00.

Do not issue current debt.

Save decisions (select "directly to the website").

PRACTICE ROUND 2

R & D ROUND 2

Able – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material cost. Example: Decrease Able's size by 0.1 and reduce MTBF by 1000 hours. Do not reduce MTBF below 14000 hours, because that is the lower limit of acceptable reliability (MTBF) for Traditional customers. Note that Able is approaching the Low End segment.

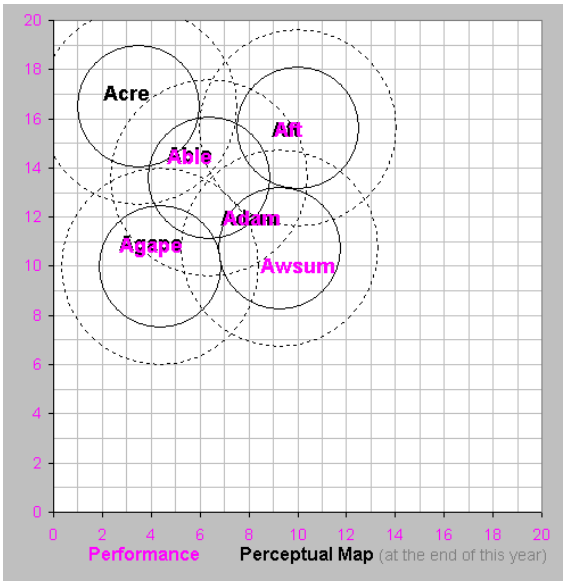
Acre – Leave positioning alone, allowing the product to age further. Reduce reliability (MTBF) to reduce material cost. Example: Reduce Acre's MTBF by 500 hours. Do not reduce MTBF below 12000 hours, because that is the lower limit of acceptable reliability (MTBF) for Low End customers. Note that Acre will leave the Low End within two years.

Adam – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material cost. Example: Increase Adam's performance by 0.1 and reduce MTBF by 1000 hours. Do not reduce MTBF below 20000 hours, because that is the lower limit for MTBF in the High End segment.

Aft – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material costs. Example: Increase Aft's performance by 0.1, and reduce MTBF by 1000 hours. Do not reduce MTBF below 22000 hours, because that is the lower limit for reliability (MTBF) in the Performance segment.

Agape – Tweak positioning to reduce age. Reduce reliability (MTBF) to reduce material costs. Example: Reduce Agape's size by 0.1, and reduce MTBF by 1000 hours. Do not reduce MTBF below 16000 hours because that is the lower limit for reliability (MTBF) in the Size segment.

New Product – Note that the new product's row is yellow instead of green, and that you cannot change these cells. This is because your product will not emerge from R&D until its current project completes. Under the rules of the simulation, new R&D projects cannot begin until the old one completes.



Important: Plan R&D projects so that they complete before January 1st. For example, a 14– month project would complete in February of the following year. Because you can only begin a project on January 1st, you would give up the opportunity to do a follow-up project during the second year. Try to keep your projects less than 1 year in length, or just under 2 years.

Marketing Round 2

Able – Offer a price cut. Hold promotion and sales budgets near current levels. Forecast sales near average. Example: Price $25.00, promotion budget $1000, sales budget $1000, and sales forecast 1400.

Acre – Hold price, decrease promotion budget, and hold sales budget steady. Forecast average unit sales. Example: Price $21.50, promotion budget $900, sales budget $1000, and sales forecast 1700.

Adam – Make moderate cuts in price, hold promotion and sales budgets steady. Forecast unit sales near last year's level. Example: Price $36.50, promotion budget $1000, sales budget $1000, sales forecast 450.

Aft – Hold price, cut promo and sales budgets. Forecast a moderate decrease in unit sales. Example: Price $34.00, promotion budget $200, sales budget $200, sales forecast 200.

Agape – Hold price, cut promo and sales budgets. Forecast a moderate decrease in unit sales. Example: Price $34.00, promotion budget $200, sales budget $200, sales forecast 200.

New Product – Marketing decisions for the new High End product are not necessary because there is no production capacity with which to build the product. This is not an issue because the product would not emerge from R&D until very late in Round 2. Ignore price, promotion and sales budget decisions for your new product.

Production Round 2

For each product, schedule production using the formula:

(Unit Sales Forecast X 1.15) - Inventory On Hand

Able – Increase automation level by 1.0 or 3.0 points.

Acre – No change.

Adam – Increase automation level by 1.0 or 3.0 points, not to exceed an automation level of 8.0.

Aft – Sell 150,000 units of capacity by entering -150 in the Buy Sell Capacity cell.

Agape – Sell 150,000 units of capacity by entering -150 in the Buy Sell Capacity cell.

New Product – Buy 500,000 units of capacity by entering 500 in the Buy Sell Capacity cell. Set an automation level of 8.0.

Finance Round 2

Match your plant investment with a long-term bond. If you do not have sufficient new bond debt capacity, issue stock to cover the shortfall.

Look at the proforma balance sheet, and add together your cash and inventory accounts. Apply the following rule of thumb. Keep between 15% and 20% of your balance sheet assets in cash and inventory. You do not care about the mix, but you do want to have adequate reserves to cover unexpected swings in inventory.

Adjust your cash position to meet the guideline from Round 1. If you are cash poor, issue stock. If you are cash rich, pay dividends and buy back stock.

Do not issue current debt.

Save decisions (select "directly to the website").

PRACTICE ROUND 3

R & D Round 3

Able – No change to positioning. Set MTBF to 14000 hours (the bottom of the Traditional range.) Note that Able is about to become a Low End product.

Acre – Leave positioning alone, allowing the product to age further. Set MTBF to 12000 hours, the bottom of the Low End range.

Adam – Note that Adam is now in the Traditional segment. Traditional customers want an ideal age of 2.0 years. If necessary, tweak positioning to reduce age so that sometime during the year Adam will be 2.0 years old. It may not require a positioning tweak. Reduce reliability (MTBF) to 20000, the bottom of the High End range.

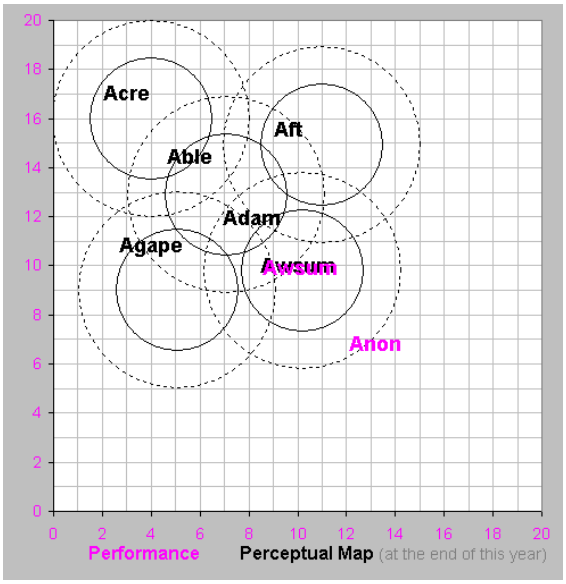
Aft – No change required.

Agape – No change required.

New Product – Note that your product's row in the table is green, indicating that it emerged from R&D late year. Tweak the positioning to keep the age low.

Second New Product – Design a second new product ahead of the High End segment. Drive the project so that the product will emerge in just under 2 years.

Important: Under the rules of the simulation, the names of all new products must have the same first letter as the name of the company.



Marketing Round 3

Able – Offer a price cut. Hold promotion and sales budgets near current levels. Expect Able to sell to both Traditional and Low End customers, but since Able does not offer a good product to either segment, plan on lower sales. Example: Price $22.00, promotion budget $1000, sales budget $1000, and sales forecast 1000.

Acre – Hold price, hold promotion budget and decrease sales budget. Forecast moderate sales growth unit sales. Example: Price $20.00, promotion budget $900, sales budget $900, and sales forecast 1800.

Adam – Cut price, hold promotion and sales budgets steady. Price Adam within the Traditional and High End segments. Example: Price $28.00, promotion budget at $1000, sales budget at $1000. Because Adam is transitioning between the High End and Traditional segments, do not expect Adam to have strong appeal to either segment. Set the sales forecast at 900.

Aft – Hold price, eliminate promo and sales budgets. Forecast that you will sell any remaining inventory from last year. Example: Price $34.00, promotion budget $0, sales budget $0, sales forecast set at inventory.

Agape – Hold price, eliminate promo and sales budgets. Forecast that you will sell any remaining inventory from last year. Example: Price $34.00, promotion budget $0, sales budget $0, sales forecast set at inventory.

New Product – Price high, promote strongly. Forecast average High End sales. Example: Price $38.50, promotion budget $1800, sales budget $1200, and sales forecast 500.

Second New Product – No change required.

Production Round 3

For each product, schedule production using the formula:

(Unit Sales Forecast X 1.15) - Inventory On Hand

Important: As your new product is coming out sometime during the year, you might not be able to use the above formula – new products cannot begin production prior to their revision (release) date. Should the number you enter into the production schedule turn red, reduce the schedule until the red number turns black.

Able – Increase automation level by 1.0 or 2.0 points, not exceed the maximum level of 10.0.

Acre – No change.

Adam – Increase automation level by 1.0 or 3.0 points, not to exceed an automation of 8.0.

Aft – Sell the remaining capacity. Keep 1 unit of capacity if you have any remaining inventory on hand, otherwise sell all capacity. One unit of capacity keeps the product in the sales channel, allowing you to sell the remaining inventory.

Agape – Sell the remaining capacity. Keep 1 unit of capacity if you have any remaining inventory on hand, otherwise sell all capacity. One unit of capacity keeps the product in the sales channel, allowing you to sell the remaining inventory.

New Product – No change.

Second New Product – Postpone buying additional capacity until next round.

Finance Round 3

Adjust your cash position to meet the guideline from Round 1. Do not retire long-term debt. Use excess cash to buy back stock and pay dividends.

Save decisions (select "directly to the website").

SUMMARY CONSIDERATIONS

Your instructor might want you to play another practice round. If so, continue the Product Lifecycle Cost Leader vision.

Having executed the plan for two or three rounds, you are now in a position to analyze it. Consider the following questions:

What are this plan's strengths? Weaknesses?

How will competitors respond to your actions?

How can you influence competitors to avoid competing with you directly?

Which performance measures support this plan?

What is the long range potential of this plan? Its future sales volume? Its future profitability?

How can you best coordinate this plan as a team?