Differentiation Strategy with a Product Life Cycle Focus

PRACTICE ROUND 1

Decision Guidelines
You are free to pursue any strategy you wish, but you might try this during the Practice rounds at any time you can abandon the Product Lifecycle Differentiation strategy entirely.

R & D
1) Traditional– tweak positioning to reduce age. Leave reliability (MTBF) unchanged. Example: Increase Traditional’s Size by 0.1. Traditional will eventually become a Low End product.
2) Low End – no changes. The customer wants an older product that trails the segment.
3) High End – improve positioning and reduce age. Leave reliability (MTBF) unchanged. Example: reduce High End’s Size by 1.2, and increase Performance by 1.2.
4) Performance – begin migration towards Traditional segment. Leave reliability unchanged. Example: Reduce Performance’s Size by 1.0, and reduce Performance by 0.3.
5) Size – begin migration to Traditional segment. Leave reliability unchanged. Example: Increase Size’s Size by 0.3, and increase Performance by 1.0.

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, we cannot begin follow-up projects next year.

MARKETING
1) Traditional– significantly increase promotion and sales budgets. Implement a modest price increase. Forecast sales as a modest improvement over last year, driven by an improved design and marketing expenditures. Example: price $28.50, promotion budget $1500, sales budget $1800, and sales forecast 1500.
2) Low End – increase price, increase promotion and sales budgets. Forecast flat unit sales growth. Example: $22.00, promotion budget $1500, sales $1800, and sales forecast 1600.
3) High End – increase price, increase promotion and sales budget. Forecast flat unit sales. Example: $39.50, promotion budget $1500, sales $1500, sales forecast 400.
4) Performance – increase price, increase promotion budget, but decrease sales budget. The sales budget drives distribution systems in the Performance Segment, and we are leaving the segment. Forecast flat unit sales. Example: $34.50, promotion budget $1500, sales budget $300, sales forecast 350.
5) Size – increase price, increase promotion budget, but decrease sales budget. Forecast flat unit sales. Example: $34.50, promotion budget $1500, sales $300, sales forecast 320.

NOTE: Sales forecasts are purposely conservative. They reflect a pessimistic point of view.

PRODUCTION
Production schedules should reflect a rule of thumb – plan for 6 weeks of inventory. That is, have enough inventory on hand to meet demand for 6 weeks beyond the sales forecast. This gives you a 12% inventory cushion. For example, suppose Marketing forecasts demand at 1000, and you have 100 units already on hand in the warehouse. You want 1000 x 112% = 1120 available for sale. Since you have 100 on hand, you would schedule 1020 for production.

Since your Marketing forecast was conservative, it is unlikely that you will sell less than your forecast, but there is a good chance that you will stock out. Capstone does not take backorders. 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 6 weeks of inventory. You hope that your actual sales will fall between your sales forecast and your inventory levels.

1) For each product, schedule production using the formula:
   (UnitSalesForecast X 112%) – InventoryOnHand.
2) Make no improvements to capacity or automation at this time.

FINANCE
Your fiscal policies should maintain adequate working capital reserves to avoid a liquidity crisis. Put another way, keep enough cash on hand to avoid Capstone’s sloan shark, Big Al, if your
competitors clobber you, resulting in large unexpected inventories in your warehouse. Inventories are paid for when you build the product. Too much unexpected inventory leads to zero cash with bills still outstanding. At that moment, Big Al arrives with a smile, pays your bills, and leaves you with a loan and a stiff interest payment. (In the United States, this event is also known as Chapter 11 bankruptcy.)

Here are some guidelines to help you avoid Big Al. Your proforma Balance Sheet predicts your financial condition at the end of this year. Make conservative marketing forecasts. Do not rely upon the computer’s forecast. 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 pessimistic expectations. This forces your proforma Balance Sheet to predict a future where your conservative sales forecast comes true and you are left with inventory. (If you sell the inventory, that’s wonderful.) Now look at the proforma Balance Sheet’s Cash and Inventory accounts. Drive your Cash position until it roughly equals your Inventory position. That is, either issue stock or borrow bonds until Cash equals Inventory. This creates an additional reserve for those times when your worst expectations are exceeded and disaster strikes.

Working capital can be thought of as the money that you need to operate day-to-day. In Capstone™ it is equivalent to your Current Assets – Cash, Accounts Receivable, and Inventory. 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 forecasting less cash and inventory. That is fine. The better your marketing forecasts, the less working capital you will require.

1) Pay a dividend between $0.50 and $1.00.
2) Do not issue Short Term Debt. If you are short of cash (unlikely) issue stock.

SAVE DECISIONS

PRACTICE ROUND 2
Decision Guidelines

R & D
1) Traditional – tweak positioning to reduce age. Reduce reliability (MTBF) to the middle of the Low End customer’s expectations. Example: Increase Traditional’s Size by 0.1. Traditional will soon become a Low End product, but it remains primarily Traditional for this year.
2) Low End – no changes. The customer wants an older product that trails the segment.
3) High End – improve positioning and reduce age. Leave reliability (MTBF) unchanged. Example: reduce High End’s Size by 1.2, and increase Performance by 1.2.
4) Performance – continue migration towards Traditional segment. Target Performance for the leading point where the Performance and Traditional circles intersect. Reduce reliability to the bottom of the Performance customer’s acceptable range. Example: Reduce Performance’s Size by 1.0, and reduce MTBF by 2,000 hours.
5) Size – continue migration to Traditional segment. Target Size for the leading point where the Size and Traditional circles intersect. Reduce reliability to the bottom of the Size customer’s acceptable range. Example: Increase Size’s Performance by 1.0, and decrease MTBF by 2000 hours.
6) New High End Product – Launch a new High End product, with a project length of 20 to 23 months (no later than December of next year.) Example: Replace the 1st NA in the list, positioned at leading edge of High End segment, say Performance 12.0, Size 8.0. Middle of the acceptable High End reliability: MTBF 23,000.

Make certain that the projects for old products 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, we cannot begin follow-up projects next year.

MARKETING
1) Traditional – increase promotion and sales budgets. Hold price. Forecast sales as flat from last year. Example: price $28.50, promotion budget $2000, sales budget $2200, and sales forecast 1500.
2) Low End – hold price, increase promotion and sales budget. Forecast modest unit sales growth from last year. Example: $22.00, promotion budget $2000, sales budget $2200, and
sales forecast 1700.
3) **High End** – hold price, increase promotion and sales budget. Forecast flat unit sales.
   Example: $39.00, promotion budget $2000, sales $2000, sales forecast 450.
4) **Performance** – hold price, increase promotion budget, and hold sales budget steady.
   Forecast flat unit sales from last year. Example: $34.00, promotion budget $1800, sales
   budget $300, sales forecast 350.
5) **Size** – hold price, increase promotion budget, and hold sales budget steady. Forecast flat unit
   sales from last year. Example: $34.00, promotion budget $1800, sales $300, sales forecast
   320.

   NOTE: Sales forecasts are purposely conservative. They reflect a pessimistic point of view.

**PRODUCTION**
Continue to use the Production rule of thumb – plan for 6 weeks of inventory.
1) For each product, schedule production using the formula:
   (UnitSalesForecast X 112%) – InventoryOnHand.
2) Make no improvements to capacity or automation at this time on existing products.
3) For your new product, buy 600 (thousand) units of capacity at an automation level of 4.0 for
   your new product.

**FINANCE**
1) Match your plant investment with a stock issue. If you cannot raise adequate capital to match
   the investment, issue bonds to cover the shortfall.
2) 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 plus Inventory. You do not care about the mix, but you do want to have adequate
   reserves to cover unexpected swings in inventory.
3) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue additional
   stock or additional bonds. If you are cash rich, pay dividends.
4) Do not issue Short Term Debt.

**SAVE DECISIONS**

**PRACTICE ROUND 3**

**Decision Guidelines**

**R & D**
1) **Traditional**– do not change positioning age. Set reliability (MTBF) to the middle of the Low
   End customer’s expectations. Traditional will now become a Low End product.
2) **Low End** – reposition Low End to the current leading edge of the Low End segment. This will
   take 1.5 to 2.0 years, and it will sacrifice both positioning and age. It is necessary, however,
   to keep Low End within the Low End segment in the long run. Example: Reduce Size by 2.0
   units. Increase Performance by 2.0 units.
3) **High End** – improve positioning and reduce age. Leave reliability (MTBF) unchanged.
   Example: reduce *High End’s* Size by 1.2, and increase Performance by 1.2.
4) **Performance** – Enter the Traditional segment. Reduce reliability to the middle of the
   Traditional customer’s acceptable range. Example: Reduce *Performance’s* Size by 0.5, and
   reduce MTBF by 5,000 hours.
5) **Size** – Enter the Traditional segment. Leave reliability (MTBF) in the middle of the Traditional
   customer’s acceptable range. Example: Increase Size’s Performance by 1.0 and increase
   size by 0.3.
7) **New High End Product** – No action is required this year because the product has not yet
   emerged from R&D.
   Make certain that the projects for old products 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, we cannot begin follow-up projects next year.

**MARKETING**
1) **Traditional** – hold promotion and sales budgets. Drop price below $23.50, the top of the Low
   End price range. Forecast a jump in sales, as Traditional will draw sales from both the Low
   End and Traditional segments. Example: price $22.50, promotion budget $2000, sales
budget $2200, and sales forecast 2000.
2) **Low End** – hold price, promotion and sales budgets. Forecast modest unit sales growth from last year. Example: $22.00, promotion budget $2000, sales budget $2200, and sales forecast 1800.

3) **High End** – hold price, promotion and sales budgets. Forecast flat unit sales. Example: $38.50, promotion budget $2000, sales $2000, sales forecast 450.

4) **Performance** – drop price below $28.50, the top of the Traditional range. Hold promotion budget, and increase sales budget significantly to pump up the Traditional distribution channels. Forecast a major increase in unit sales from last year. Example: $28.50, promotion budget $1800, sales budget $1800, sales forecast 1100.

5) **Size** – drop price below $28.50. Hold promotion budget and increase sales budget. Forecast a major increase in unit sales from last year. Example: $28.50, promotion budget $1800, sales budget $1800, sales forecast 1100.

**NOTE:** Sales forecasts are purposely conservative. They reflect a pessimistic point of view.

**PRODUCTION**
Continue to use the Production rule of thumb – plan for 6 weeks of inventory.

1) For each product, schedule production using the formula:
   \[(\text{UnitSalesForecast} \times 112\%) - \text{InventoryOnHand}\].

2) Increase capacity on Performance and Size. For example, add 400 (thousand) units to each product.

**FINANCE**
1) You may be able to pay for your plant expansion with Cash on hand. If not, raise the additional capital with stock.

2) 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 plus Inventory. You do not care about the mix, but you do want to have adequate reserves to cover unexpected swings in inventory.

3) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue additional stock or additional bonds. If you are cash rich, pay dividends.

4) Do not issue Short Term Debt.

**SAVE DECISIONS**
Cost Leader with Product Life Cycle Focus strategy

Practice Round 1
Decision Guidelines
You are free to pursue any strategy you wish, but you might try this during the Practice rounds at any time you can abandon the Cost Leader Product Lifecycle strategy entirely.

R & D
1) Able – tweak positioning to reduce age. Reduce reliability to reduce material cost. Example: Increase Able’s Performance by 0.1 and reduce MTBF by 1000 hours.
2) Acre – leave positioning alone, allowing the product to age further. Reduce reliability to reduce material cost. Example: reduce Acre’s MTBF by 1000 hours.
3) Adam – tweak positioning to reduce age. Reduce reliability to reduce material cost. Example: reduce Adam’s Size by 0.1, and reduce MTBF by 1000 hours.
4) Aft – tweak positioning to reduce age. Reduce reliability to reduce material costs. Example: Increase Aft’s Performance by 0.1, and reduce MTBF by 1000 hours.
5) Agape – tweak positioning to reduce age. Reduce reliability to reduce material costs. Example: Reduce Agape’s Size by 0.1, and reduce MTBF by 1000 hours.
6) New Product: Launch a new High End product, with a project length of 20 to 23 months (no later than December of next year.) Example: NAME: Awsum (replace the 1st NA in the list), positioned at the leading edge of High End segment, say Performance 10.0, Size 10.0. Minimum acceptable High End reliability: MTBF20,000.

MARKETING
1) Able – make modest cuts in price, promotion, and sales budgets. Forecast sales as a modest improvement over last year, driven by an improved age and price cut. Example: price $27.50, promotion budget $900, sales budget $900, and sales forecast 1500.
3) Adam – make modest cuts in price, promotion, and sales budgets. Forecast flat unit sales. Example: $37.50, promotion budget $700, sales $700, sales forecast 400.
4) Aft – increase price, cut promo and sales budgets. Forecast a moderate decrease in unit sales. Example: $34.50, promotion budget $400, sales $400, sales forecast 300.
5) Agape – increase price, cut promo and sales budgets. Forecast a moderate decrease in unit sales. Example: $34.50, promotion budget $400, sales $400, sales forecast 280.

NOTE: We will price and market Awsum during the year we begin production.
NOTE: Sales forecasts are purposely conservative. They reflect a pessimistic point of view.

PRODUCTION
Production schedules should reflect a rule of thumb – plan for 6 weeks of inventory. That is, have enough inventory on hand to meet demand for 6 weeks beyond the sales forecast. This gives you a 12% inventory cushion. For example, suppose Marketing forecasts demand at 1000, and you have 100 units already on hand in the warehouse. You want 1000 x 112% = 1120 available for sale. Since you have 100 on hand, you would schedule 1020 for production.
Since your Marketing forecast was conservative, it is unlikely that you will sell less than your forecast, but there is a good chance that you will stock out. Capstone does not take backorders. 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 6 weeks of inventory. You hope that your actual sales will fall between your sales forecast and your inventory levels.
1) For each product, schedule production using the formula: (UnitSalesForecast X 112%) – InventoryOnHand.
2) For Able, increase automation level by 1.0 or 2.0 units.
3) For Acre, make no changes in plant capacity or automation.
4) For Adam, increase automation level by 2.0 or 3.0 units.
5) For Aft, sell 250 (thousand) units of capacity.
6) For Agape, sell 250 (thousand) units of capacity.
7) For your new product, do not buy capacity this year. Wait until next year.

FINANCE
Your fiscal policies should maintain adequate working capital reserves to avoid a liquidity crisis. Put another way, keep enough cash on hand to avoid Capstone’s loan shark, Big Al, if your competitors clobber you, resulting in large unexpected inventories in your warehouse. Inventories are paid for when you build the product. Too much unexpected inventory leads to zero cash with bills still outstanding. At that moment, Big Al arrives with a smile, pays your bills, and leaves you with a loan and a stiff interest payment. (In the United States, this event is also known as Chapter 11 bankruptcy.)

Here are some guidelines to help you avoid Big Al. Your proforma Balance Sheet predicts your financial condition at the end of this year. Make conservative marketing forecasts. Do not rely upon the computer’s forecast. 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 pessimistic expectations. This forces your proforma Balance Sheet to predict a future where your conservative sales forecast comes true and you are left with inventory. (If you sell the inventory, that’s wonderful.) Now look at the proforma Balance Sheet’s Cash and Inventory accounts. Drive your Cash position until it roughly equals your Inventory position. That is, either issue stock or borrow bonds until Cash equals Inventory. This creates an additional reserve for those times when your worst expectations are exceeded and disaster strikes.

Working capital can be thought of as the money that you need to operate day-to-day. In Capstone™ it is equivalent to your Current Assets – Cash, Accounts Receivable, and Inventory. 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 forecasting less cash and inventory. That is fine. The better your marketing forecasts, the less working capital you will require.

1) 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.
2) Pay a dividend between $0.50 and $1.00.
3) Do not issue Short Term Debt.

SAVE DECISIONS

PRACTICE ROUND 2
Decision Guidelines

R & D
1) Able – tweak positioning to reduce age. Reduce reliability to reduce material cost. Example: Decrease Able’s Size by 0.1 and reduce MTBF by 1000 hours. Do not reduce MTBF below 14,000 hours, because that is the lower limit of acceptable reliability for Traditional customers. Note that Able is approaching the Low End segment.
2) Acre – leave positioning alone, allowing the product to age further. Reduce reliability to reduce material cost. Example: reduce Acre’s MTBF by 1000 hours. Do not reduce MTBF below 12,000 hours, because that is the lower limit of acceptable reliability for Low End customers. Note that Acre will leave the Low End within two years.
3) Adam – tweak positioning to reduce age. Reduce reliability to reduce material cost. Example: increase Adam’s Performance by 0.1, and reduce MTBF by 1000 hours. Do not reduce MTBF below 20,000 hours, because that is the lower limit for MTBF in the High End segment.
4) Aft – tweak positioning to reduce age. Reduce reliability to reduce material costs. Example: Increase Aft’s Performance by 0.1, and reduce MTBF by 1000 hours. Do not reduce MTBF below 22,000 hours, because that is the lower limit for reliability in the Performance segment.
5) Agape – tweak positioning to reduce age. Reduce reliability to reduce material costs. Example: Reduce Agape’s Size by 0.1, and reduce MTBF by 1000 hours. Do not reduce MTBF below 16,000 hours, because that is the lower limit for reliability in the Size segment.
6) New Product: Note that on the computer’s R&D display your product’s row is yellow instead
of green, and that you cannot change any of the cells on the spreadsheet. This is because
your product will not emerge from R&D until its current project completes. Furthermore, under
the rules, new R&D projects can only begin on January 1st. It is important to 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. This works your R&D
department hardest.

MARKETING
1) Able – offer a price cut. Hold promotion and sales budgets near current levels. Forecast sales
near average. Example: price $25.00, promotion budget $900, sales budget $900, and sales
forecast 1400.
2) Acre – hold price, decrease promotion budget, and hold sales budget flat. Forecast average
unit sales. Example: $21.50, promotion budget $500, sales $800, and sales forecast 1700.
3) Adam – make modest cuts in price, hold promotion and sales budgets steady. Forecast flat
unit sales. Example: $36.50, promotion budget $700, sales $700, sales forecast 450.
4) Aft – hold price, cut promo and sales budgets. Forecast a moderate decrease in unit sales.
Example: $34.00, promotion budget $200, sales $200, sales forecast 200.
5) Agape – hold price, cut promo and sales budgets. Forecast a moderate decrease in unit
sales. Example: $34.00, promotion budget $200, sales $200, sales forecast 200.
6) New Product: Marketing decisions for the new High End product are irrelevant because there
is no production capacity to build the product. This is not an issue, because the product
would not emerge from R&D until very late in the year. Ignore price, promotion and sales
budget decisions for your new product.

PRODUCTION
8) For each product, schedule production using the formula:
(UnitSalesForecast X 112%) – InventoryOnHand.
   1) For Able, increase automation level by 2.0 or 3.0 units.
   2) For Acre, no change.
   3) For Adam, increase automation level by 2.0 or 3.0 units, not to exceed an automation level of
      8.0.
   4) For Aft, sell 150 (thousand) units of capacity.
   5) For Agape, sell 150 (thousand) units of capacity.
   6) For your new product, buy 500 (thousand) units of capacity at automation level 8.0.

FINANCE
1) 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.
2) 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 plus Inventory. You do not care about the mix, but you do want to have adequate
reserves to cover unexpected swings in inventory.
3) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue stock. If
you are cash rich, pay dividends and buy back stock.
4) Do not issue Short Term Debt.

SAVE DECISIONS

PRACTICE ROUND 3
Decision Guidelines
R & D
1) 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.
2) Acre – leave positioning alone, allowing the product to age further. Set MTBF to 12000 hours,
the bottom of the Low End range.
3) Adam – Note that Adam is now straddling the Traditional and High End segments. 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 to 20000, the bottom of the High End range.
4) Aft – no action.
5) Agape – no action.
6) 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.
7) 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.

MARKETING
1) 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 for average sales. Example: price $22.00, promotion budget $900, sales budget $900, and sales forecast 1800.
2) Acre – hold price, decrease promotion budget, and hold sales budget flat. Forecast average unit sales. Example: $21.00, promotion budget $500, sales $800, and sales forecast 1900.
3) Adam – Cut price, hold promotion and sales budgets steady. Expect Adam to attract customers from both Traditional and High End segments, with unit sales about the same as an average Traditional product. Example: $29.00, promotion budget $700, sales $700, sales forecast 1200.
4) Aft – hold price, eliminate promo and sales budgets. Forecast that you will sell any remaining inventory from last year. Example: $34.00, promotion budget $0, sales $0, sales forecast set at inventory.
5) Agape – hold price, eliminate promo and sales budgets. Forecast that you will sell any remaining inventory from last year. Example: $34.00, promotion budget $0, sales $0, sales forecast set at inventory.
7) Second New Product – no actions are required.

PRODUCTION
1) For each product, schedule production using the formula:
   (UnitSalesForecast X 112%) – InventoryOnHand.
2) Exception – build 1000 of your new product, which is 100% overtime.
3) For Able, increase automation level by 1.0 or 2.0 units, not exceed the maximum level of 10.0.
4) For Acre, no change.
5) For Adam, increase automation level by 2.0 or 3.0 units, not to exceed an automation level of 8.0.
6) For 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 alive until you can sell the remaining inventory.
7) For 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 alive until you can sell the remaining inventory.
8) For your new product, no change.
9) For your second new product, postpone buying additional capacity until next round.

FINANCE
1) Follow the guidelines from last round to manage your cash position.
2) Do not retire long-term debt. Use excess cash to buy back stock and pay dividends.

SAVE DECISIONS
Niche Differentiation strategy

PRACTICE ROUND 1

Decision Guidelines
You are free to pursue any strategy you wish, but you might try this during the Practice rounds at any time you can abandon the Niche Differentiation strategy entirely.

R & D
1) Fast – tweak positioning to reduce age. Reduce reliability to reduce material cost. Example: Increase Performance by 0.1 and reduce MTBF by 1000 hours.
2) Feat – leave positioning alone, allowing the product to age further. Reduce reliability to reduce material cost. Example: reduce MTBF by 1000 hours.
3) Fist – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: reduce Size by 1.2, and increase Performance by 1.2.
4) Foam – improve positioning and reduce age. Improve reliability to enhance demand. Example: Increase Performance by 1.4, reduce Size by 0.5, and increase MTBF by 1000 hours.
5) Fume – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Reduce Size by 1.4, and increase Performance by 0.5.
6) New High End product – Launch a new High End product, with a project length of 20 to 23 months (no later than December of next year.) Example: NAME: Fire (replace the 1st NA in the list), positioned at leading edge of High End segment, say Performance 10.2, Size 9.8. Set MTBF in the middle of the High End reliability range: MTBF 23,000.
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, we cannot begin follow-up projects next year.

MARKETING
1) Fast – increase price, make modest cuts in promotion and sales budget. Forecast a modest reduction in unit sales compared to last year. Example: price $28.50, promotion budget $600, sales budget $600, and sales forecast 1000.
2) Feat – increase price, make modest cuts in promotion and sales budget. Forecast a modest reduction in unit sales compared to last year. Example: $23.50, promotion budget $600, sales $800, and sales forecast 1400.
3) Fist – increase price, promotion budget and sales budget. Forecast flat unit sales. Example: $39.50, promotion budget $1900, sales $1900, sales forecast 400.
4) Foam – increase price, promotion budget and sales budget. Forecast flat unit sales. Example: $34.50, promotion budget $1900, sales $1900, sales forecast 440.
5) Fume – increase price, promotion budget and sales budget. Forecast flat unit sales. Example: $34.50, promotion budget $1700, sales $1700, sales forecast 390.
6) New High End product – no action required because the product will not emerge from R&D until next year.

NOTE: Sales forecasts are purposely conservative. They reflect a pessimistic point of view.

PRODUCTION
Production schedules should reflect a rule of thumb – plan for 6 weeks of inventory. That is, have enough inventory on hand to meet demand for 6 weeks beyond the sales forecast. This gives you a 12% inventory cushion. For example, suppose Marketing forecasts demand at 1000, and you have 100 units already on hand in the warehouse. You want 1000 x 112% = 1120 available for sale. Since you have 100 on hand, you would schedule 1020 for production.
Since your Marketing forecast was conservative, it is unlikely that you will sell less than your forecast, but there is a good chance that you will stock out. Capstone does not take backorders. If you cannot meet demand, sales go to competitors. Therefore, you want to plan for the upside as well as the downside. Your Proform Balance Sheet will forecast about 6 weeks of inventory. You hope that your actual sales will fall between your sales forecast and your inventory levels.
1) For each product, schedule production using the formula:
(UnitSalesForecast X 112%) – InventoryOnHand.
2) *Fist* – sell 200 to 300 units of capacity. *Fist* has too much capacity, and given our new product it is unlikely that we will need 900 units of capacity in the future.

3) Make no other plant improvements to capacity or automation at this time.

**FINANCE**

Your fiscal policies should maintain adequate working capital reserves to avoid a liquidity crisis. Put another way, keep enough cash on hand to avoid Capstone’s loan shark, Big Al, if your competitors clobber you, resulting in large unexpected inventories in your warehouse. Inventories are paid for when you build the product. Too much unexpected inventory leads to zero cash with bills still outstanding. At that moment, Big Al arrives with a smile, pays your bills, and leaves you with a loan and a stiff interest payment. (In the United States, this event is also known as Chapter 11 bankruptcy.)

Here are some guidelines to help you avoid Big Al. Your proforma Balance Sheet predicts your financial condition at the end of this year. Make conservative marketing forecasts. Do not rely upon the computer’s forecast. 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 pessimistic expectations. This forces your proforma Balance Sheet to predict a future where your conservative sales forecast comes true and you are left with inventory. (If you sell the inventory, that’s wonderful.) Now look at the proforma Balance Sheet’s Cash and Inventory accounts. Drive your Cash position until it roughly equals your Inventory position. That is, either issue stock or borrow bonds until Cash equals Inventory. This creates an additional reserve for those times when your worst expectations are exceeded and disaster strikes.

Working capital can be thought of as the money that you need to operate day-to-day. In Capstone™ it is equivalent to your Current Assets – Cash, Accounts Receivable, and Inventory. 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 forecasting less cash and inventory. That is fine. The better your marketing forecasts, the less working capital you will require.

1) Pay a dividend between $0.50 and $1.00.
2) Do not issue Short Term Debt. If you are short of cash (unlikely) issue stock.

**SAVE DECISIONS**

**PRACTICE ROUND 2**

**Decision Guidelines**

**R & D**

1) *Fast* – tweak positioning to reduce age. Reduce reliability to reduce material cost. Example: Reduce Size by 0.1 and reduce MTBF by 1000 hours.
2) *Feat* – leave positioning alone, allowing the product to age further. Reduce reliability to reduce material cost. Example: reduce MTBF by 1000 hours.
3) *Fist* – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: reduce Size by 1.2, and increase Performance by 1.2.
4) *Foam* – improve positioning and reduce age. Improve reliability to enhance demand. Example: Increase Performance by 1.4, reduce Size by 0.5, and increase MTBF by 1000 hours.
5) *Fume* – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Reduce Size by 1.4, and increase Performance by 0.5.
6) New High End product – no action required. The product will emerge late in this year.
7) New Performance product – Launch a new Performance product, with a project length of 20 to 24 months (no later than December of next year.) Example: NAME: *Fox* (replace the 1st NA in the list), positioned at leading edge of Performance segment, say Performance 13.0, Size 14.0. Set MTBF near the top of the Performance reliability range: MTBF 26,000.

**MARKETING**

1) *Fast* – hold price, promotion and sales budgets. Forecast flat unit sales compared to last year. Example: price $28.50, promotion budget $600, sales budget $600, and sales forecast 1000.
2) *Feat* – hold price, promotion and sales budgets. Forecast flat unit sales compared to last
year. Example: $23.50, promotion budget $600, sales $800, and sales forecast 1400.
3) Fist – hold price, promotion budget and sales budget. Forecast a modest increase in unit sales. Example: $39.50, promotion budget $1900, sales $1900, sales forecast 500.
4) Foam – hold price, promotion budget and sales budget. Forecast a modest increase in unit sales. Example: $34.50, promotion budget $1900, sales $1900, sales forecast 500.
5) Fume – hold price, promotion budget and sales budget. Forecast a modest increase in unit sales. Example: $34.50, promotion budget $1700, sales $1700, sales forecast 450.
6) New High End product (Fire) – no action required because the product will not emerge from R&D until the end of this year, and it has no capacity yet.
7) New Performance product (Fox) – no action required because the product will not emerge from R&D until next year.

PRODUCTION
1) For each product, schedule production using the formula: 
   \( \text{UnitSalesForecast} \times 112\% - \text{InventoryOnHand} \).
2) New High End product (Fire) – buy 600 units of capacity at automation level 5.0.
3) Make no other improvements to capacity or automation at this time.

FINANCE
1) 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 plus Inventory. You do not care about the mix, but you do want to have adequate reserves to cover unexpected swings in inventory.
2) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue additional stock to cover the investment in new capacity. If you are cash rich, pay dividends.
3) Do not issue Short Term Debt.

SAVE DECISIONS

PRACTICE ROUND 3

Decision Guidelines

R & D
1) Fast – no action. Fast is about to enter the Low End segment. Next round, reduce reliability (MTBF) to 12,000 hours.
2) Feat – No change required.
3) Fist – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: reduce Size by 1.2, and increase Performance by 1.2. Fist should glide over the High End segment’s Ideal Spot sometime during the round.
4) Foam – improve positioning and reduce age. Hold reliability steady. Example: Increase Performance by 1.4, reduce Size by 0.5. Foam should glide over the Ideal Spot sometime during the round.
5) Fume – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Reduce Size by 1.4, and increase Performance by 0.5. Fume should glide over the Ideal Spot sometime during the round.
6) New High End product (Fire) – tweak positioning and reduce age. Hold reliability (MTBF) steady. Example: reduce Size by 0.2, and increase Performance by 0.2. Fire should glide over the High End segment’s Ideal Spot sometime during the round.
7) New Performance product (Fox) – no action required. Fox will emerge later this year.
8) New Size product – Launch a new Size product, with a project length of 20 to 24 months (no later than December of next year.) Example: NAME: Fuse (replace the next NA in the list), positioned at leading edge of the Size segment, say Performance 7.0, Size 7.0. Set MTBF near the middle of the Size reliability range: MTBF 19,000.

MARKETING
1) Fast – reduce price, maintain promotion and sales budget. Expect Fast to sell to both Traditional and Low End customers, but since Fast does not offer a good product to either segment, plan for average sales. Example: price $23.00, promotion budget $800, sales budget $800, and sales forecast 1800.
2) Feat – hold price high, maintain promotion and sales budget. Forecast modest unit sales
growth. Example: $23.00, promotion budget $2200, sales $2200, and sales forecast 1900.
3) **Fist** – hold price high, maintain promotion and sales budget. Forecast flat unit sales.
   Example: $38.00, promotion budget $2000, sales $2000, sales forecast 500.
4) **Foam** – hold price high, maintain promotion and sales budget. Forecast improved unit sales.
   Example: $33.00, promotion budget $1800, sales $1800, sales forecast 700.
5) **Fume** – hold price high, maintain promotion and sales budget. Forecast improved unit sales.
   Example: $33.00, promotion budget $1900, sales $1900, sales forecast 700.

**PRODUCTION**
1) For each product, schedule production using the formula:
   \[(\text{UnitSalesForecast} \times 112\%) - \text{InventoryOnHand}.\]
2) **Fast** – no action.
3) **Feat** – no action.
4) **Fist** – increase automation by 1.0 to 2.0 points.
5) **Foam** – increase automation by 1.0 to 2.0 points.
6) **Fume** – no action.
7) **Fire** – no action.
8) **Fox** – buy 600 units of capacity at automation level 5.0.
9) **Fuze** – no action.

**FINANCE**
1) You may have Cash on hand to cover your plant and equipment investment. If not, issue stock to cover the shortfall.
2) 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 plus Inventory. You do not care about the mix, but you do want to have adequate reserves to cover unexpected swings in inventory.
3) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue stock. If you are cash rich, pay dividends and buy back stock.
4) Do not issue Short Term Debt.

**SAVE DECISIONS**
Broad Cost Leader strategy

PRACTICE ROUND 1

Decision Guidelines
You are free to pursue any strategy you wish, but you might try this during the Practice rounds at any time you can abandon the Broad Cost Leader strategy entirely.

R & D
1) Cake – improve positioning and reduce age. Reduce reliability to reduce material cost. Example: Increase Cake’s Performance by 0.9, reduce Size by 0.9, and reduce MTBF by 1000 hours.
2) Cedar – leave positioning alone, allowing the product to age further. Reduce reliability to reduce material cost. Example: reduce Cedar’s MTBF by 1000 hours.
3) Cid – improve positioning and reduce age. Reduce reliability to reduce material cost. Example: reduce Cid’s Size by 1.1, increase Performance by 1.1, and reduce MTBF by 1000 hours.
4) Coat – improve positioning and reduce age. Reduce reliability to reduce material costs. Example: Increase Coat’s Performance by 1.4, reduce Size by 0.4, and reduce MTBF by 1000 hours.
5) Cure – improve positioning and reduce age. Reduce reliability to reduce material costs. Example: Reduce Cure’s Size by 1.4, increase Performance by 0.4, and reduce MTBF by 1000 hours.

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, we cannot begin follow-up projects next year.

MARKETING
1) Cake – make modest cuts in price, promotion, and sales budgets. Forecast sales as a modest reduction from last year, because our product will not be revised until late this year. Example: price $27.00, promotion budget $800, sales budget $800, and sales forecast 900.
2) Cedar – make modest cuts in price, decrease promotion and sales budget. Forecast increased unit sales growth. Example: $19.50, promotion budget $800, sales $800, and sales forecast 1800.
3) Cid – make modest cuts in price, promotion, and sales budgets. Forecast flat unit sales. Example: $37.00, promotion budget $700, sales $700, sales forecast 400.
4) Coat – make modest cuts in price, cut promo and sales budgets. Forecast flat unit sales growth. Example: $34.00, promotion budget $400, sales $400, sales forecast 450.
5) Cure – make modest cuts price, cut promo and sales budgets. Forecast flat unit sales growth. Example: $34.50, promotion budget $400, sales $400, sales forecast 280.

NOTE: Sales forecasts are purposely conservative. They reflect a pessimistic point of view.

PRODUCTION
Production schedules should reflect a rule of thumb – plan for 6 weeks of inventory. That is, have enough inventory on hand to meet demand for 6 weeks beyond the sales forecast. This gives you a 12% inventory cushion. For example, suppose Marketing forecasts demand at 1000, and you have 100 units already on hand in the warehouse. You want 1000 x 112% = 1120 available for sale. Since you have 100 on hand, you would schedule 1020 for production.

Since your Marketing forecast was conservative, it is unlikely that you will sell less than your forecast, but there is a good chance that you will stock out. Capstone does not take backorders. 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 6 weeks of inventory. You hope that your actual sales will fall between your sales forecast and your inventory levels.

1) For each product, schedule production using the formula: (UnitSalesForecast X 112%) – InventoryOnHand.
2) For Cake, increase automation level by 1.0 or 2.0 units. Sell 500 units of existing capacity.
3) For Cedar, increase automation level by 1.0 or 2.0 units.
4) For Cid, increase automation level by 0.5 to 1.0 units.
5) For Coat, increase automation level by 0.5 to 1.0 units. 
6) For Cure, increase automation level by 0.5 to 1.0 units.

FINANCE

Your fiscal policies should maintain adequate working capital reserves to avoid a liquidity crisis. Put another way, keep enough cash on hand to avoid Capstone’s loan shark, Big Al, if your competitors clobber you, resulting in large unexpected inventories in your warehouse. Inventories are paid for when you build the product. Too much unexpected inventory leads to zero cash with bills still outstanding. At that moment, Big Al arrives with a smile, pays your bills, and leaves you with a loan and a stiff interest payment. (In the United States, this event is also known as Chapter 11 bankruptcy.)

Here are some guidelines to help you avoid Big Al. Your proforma Balance Sheet predicts your financial condition at the end of this year. Make conservative marketing forecasts. Do not rely upon the computer's forecast. 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 pessimistic expectations. This forces your proforma Balance Sheet to predict a future where your conservative sales forecast comes true and you are left with inventory. (If you sell the inventory, that's wonderful.) Now look at the proforma Balance Sheet's Cash and Inventory accounts. Drive your Cash position until it roughly equals your Inventory position. That is, either issue stock or borrow bonds until Cash equals Inventory. This creates an additional reserve for those times when your worst expectations are exceeded and disaster strikes.

Working capital can be thought of as the money that you need to operate day-to-day. In Capstone it is equivalent to your Current Assets – Cash, Accounts Receivable, and Inventory.

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 forecasting less cash and inventory. That is fine. The better your marketing forecasts, the less working capital you will require.

1) 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.
2) Pay a dividend between $0.50 and $1.00.
3) Do not issue Short Term Debt.

SAVE DECISIONS

PRACTICE ROUND 2

Decision Guidelines

R & D

1) Cake – improve positioning and reduce age. Reduce reliability to reduce material cost. Example: Increase Cake’s Performance by 0.9, reduce Size by 0.9, and reduce MTBF by 1000 hours.
2) Cedar – leave positioning alone, allowing the product to age further. Reduce reliability to reduce material cost. Example: reduce Cedar’s MTBF by 1000 hours.
3) Cid – improve positioning and reduce age. Reduce reliability to reduce material cost. Example: reduce Cid’s Size by 1.1, increase Performance by 1.1, and reduce MTBF by 1000 hours.
4) Coat – improve positioning and reduce age. Reduce reliability to reduce material costs. Example: Increase Coat’s Performance by 1.4, reduce Size by 0.4, and reduce MTBF by 1000 hours.
5) Cure – improve positioning and reduce age. Reduce reliability to reduce material costs. Example: Reduce Cure’s Size by 1.4, increase Performance by 0.4, and reduce MTBF by 1000 hours.

MARKETING

1) Cake – offer a price cut. Hold promotion and sales budgets near current levels. Forecast sales near average. Example: price $25.00, promotion budget $900, sales budget $900, and sales forecast 1400.
2) Cedar – offer a price cut, hold promotion and sales budgets near current levels.. Forecast above average unit sales. Example: $18.50, promotion budget $900, sales $900, and sales
3) Cid – make modest cuts in price, hold promotion and sales budgets steady. Forecast modest improvements in unit sales. Example: $36.00, promotion budget $700, sales $700, sales forecast 480.

4) Coat – make modest cuts in price, hold promo and sales budgets. Forecast a moderate increase in unit sales. Example: $32.00, promotion budget $700, sales $700, sales forecast 520.

5) Cure – make modest cuts in price, hold promo and sales budgets. Forecast a moderate increase in unit sales. Example: $32.00, promotion budget $700, sales $700, sales forecast 450.

**PRODUCTION**

1) For each product, schedule production using the formula:
   \[(\text{UnitSalesForecast} \times 112\%) - \text{InventoryOnHand}\].

2) **Cake** – increase automation level by 1.0 or 2.0 units, not to exceed 8.0.

3) **Cedar** – increase automation level by 1.0 or 2.0 units.

4) **Cid** – increase automation level by 0.5 to 1.5 units, not to exceed an automation level of 6.0.

5) **Coat** – increase automation level by 0.5 to 1.5 units, not to exceed an automation level of 6.5.

6) **Cure** – increase automation level by 0.5 to 1.5 units, not to exceed an automation level of 6.5.

**FINANCE**

1) 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.

2) 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 plus Inventory. You do not care about the mix, but you do want to have adequate reserves to cover unexpected swings in inventory.

3) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue stock. If you are cash rich, pay dividends and buy back stock.

4) Do not issue Short Term Debt.

**SAVE DECISIONS**

**PRACTICE ROUND 3**

**Decision Guidelines**

**R & D**

1) **Cake** – improve positioning and reduce age. Reduce reliability to reduce material cost. Example: Increase **Cake’s** Performance by 0.9, reduce Size by 0.9, and reduce MTBF by 1000 hours. MTBF must not fall below the 14,000 lower reliability limit for Traditional customers.

2) **Cedar** – reposition Cedar to the current leading edge of the Low End segment. This will take 1.5 to 2.0 years, and it will sacrifice both positioning and age. It is necessary, however, to keep Cedar within the Low End segment in the long run. Example: Reduce Size by 2.0 units. Increase Performance by 2.0 units.

3) **Cid** – improve positioning and reduce age. Reduce reliability to reduce material cost. Example: reduce **Cid’s** Size by 1.1, increase Performance by 1.1, and reduce MTBF by 1000 hours. MTBF must not fall below the 20,000 lower reliability limit for High End customers.

4) **Coat** – improve positioning and reduce age. Reduce reliability to reduce material costs. Example: Increase **Coat’s** Performance by 1.4, reduce Size by 0.4, and reduce MTBF by 1000 hours. MTBF must not fall below the 22,000 lower reliability limit for Performance customers.

5) **Cure** – improve positioning and reduce age. Reduce reliability to reduce material costs. Example: Reduce **Cure’s** Size by 1.4, increase Performance by 0.4, and reduce MTBF by 1000 hours. MTBF must not fall below the 16,000 lower reliability limit for Size customers.

**MARKETING**

1) **Cake** – Offer a price cut. Hold promotion and sales budgets near current levels. Forecast sales near average. Example: price $24.50, promotion budget $900, sales budget $900, and sales forecast 1400.
2) Cedar – offer a price cut, hold promotion and sales budgets near current levels. Forecast above average unit sales. Example: $18.00, promotion budget $900, sales $900, and sales forecast 2300.

3) Cid – hold price, hold promotion and sales budgets steady. Forecast flat unit sales. Example: $36.00, promotion budget $700, sales $700, sales forecast 480.

4) Coat – hold price, hold promo and sales budgets. Forecast a moderate increase in unit sales. Example: $32.00, promotion budget $700, sales $700, sales forecast 600.

5) Cure – hold price, hold promo and sales budgets. Forecast a moderate increase in unit sales. Example: $32.00, promotion budget $700, sales $700, sales forecast 550.

**PRODUCTION**

1) For each product, schedule production using the formula:

\[(\text{UnitSalesForecast \times 112\%}) - \text{InventoryOnHand}\].

2) **Cake** – increase automation level by 1.0 or 2.0 units, not to exceed 8.0.

3) **Cedar** – increase automation level by 1.0 or 2.0 units, not to exceed the 10.0 upper limit.

4) **Cid** – increase automation level by 0.5 to 1.5 units, not to exceed an automation level of 6.0.

5) **Coat** – increase automation level by 0.5 to 1.5 units, not to exceed an automation level of 6.5.

6) **Cure** – increase automation level by 0.5 to 1.5 units, not to exceed an automation level of 6.5.

**FINANCE**

1) 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.

2) 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 plus Inventory. You do not care about the mix, but you do want to have adequate reserves to cover unexpected swings in inventory.

3) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue stock. If you are cash rich, pay dividends and buy back stock.

4) Do not issue Short Term Debt.
Broad Differentiation strategy

PRACTICE ROUND 1
Decision Guidelines
You are free to pursue any strategy you wish, but you might try this during the Practice rounds at any time you can abandon the Broad Differentiation strategy entirely.

R & D
1) Daze – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Increase Daze’s Performance by 0.8, and reduce Size by 1.0.
2) Dell – leave positioning alone, allowing the product to age further. Hold reliability (MTBF) steady. Example: no action required.
3) Dixie – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: reduce Dixie’s Size by 1.0, and increase Performance by 1.2.
4) Dot – improve positioning and reduce age. Improve reliability to enhance demand. Example: Increase Dot’s Performance by 1.2, reduce Size by 0.5, and increase MTBF by 1000 hours.
5) Dune – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Reduce Dune’s Size by 1.2, and increase Performance by 0.5.

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, we cannot begin follow-up projects next year.

MARKETING
1) Daze – increase price, promotion budget, and sales budget. Forecast sales as a modest improvement from last year, because our product will not be revised until late this year. Example: price $29.00, promotion budget $2000, sales budget $2000, and sales forecast 1400.
4) Dot – increase price, promotion budget and sales budget. Forecast flat unit sales. Example: $34.50, promotion budget $1700, sales $1700, sales forecast 450.
5) Dune – increase price, promotion budget and sales budget. Forecast flat unit sales. Example: $34.50, promotion budget $1800, sales $1800, sales forecast 380.

NOTE: Sales forecasts are purposely conservative. They reflect a pessimistic point of view.

PRODUCTION
Production schedules should reflect a rule of thumb – plan for 6 weeks of inventory. That is, have enough inventory on hand to meet demand for 6 weeks beyond the sales forecast. This gives you a 12% inventory cushion. For example, suppose Marketing forecasts demand at 1000, and you have 100 units already on hand in the warehouse. You want 1000 x 112% = 1120 available for sale. Since you have 100 on hand, you would schedule 1020 for production.
Since your Marketing forecast was conservative, it is unlikely that you will sell less than your forecast, but there is a good chance that you will stock out. Capstone does not take backorders. 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 6 weeks of inventory. You hope that your actual sales will fall between your sales forecast and your inventory levels.
1) For each product, schedule production using the formula: (UnitSalesForecast X 112%) – InventoryOnHand.
2) Make no improvements to capacity or automation at this time.

FINANCE
Your fiscal policies should maintain adequate working capital reserves to avoid a liquidity crisis. Put another way, keep enough cash on hand to avoid Capstone’s loan shark, Big Al, if your competitors clobber you, resulting in large unexpected inventories in your warehouse. Inventories are paid for when you build the product. Too much unexpected inventory leads to zero cash with bills still outstanding. At that moment, Big Al arrives with a smile, pays your bills, and leaves you
with a loan and a stiff interest payment. (In the United States, this event is also known as Chapter 11 bankruptcy.)

Here are some guidelines to help you avoid Big Al. Your proforma Balance Sheet predicts your financial condition at the end of this year. Make conservative marketing forecasts. Do not rely upon the computer’s forecast. 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 pessimistic expectations. This forces your proforma Balance Sheet to predict a future where your conservative sales forecast comes true and you are left with inventory. (If you sell the inventory, that’s wonderful.) Now look at the proforma Balance Sheet’s Cash and Inventory accounts. Drive your Cash position until it roughly equals your Inventory position. That is, either issue stock or borrow bonds until Cash equals Inventory. This creates an additional reserve for those times when your worst expectations are exceeded and disaster strikes.

Working capital can be thought of as the money that you need to operate day-to-day. In Capstone™ it is equivalent to your Current Assets – Cash, Accounts Receivable, and Inventory. 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 forecasting less cash and inventory. That is fine. The better your marketing forecasts, the less working capital you will require.

1) Pay a dividend between $0.50 and $1.00.
2) Do not issue Short Term Debt. If you are short of cash (unlikely) issue stock.

SAVE DECISIONS

PRACTICE ROUND 2

Decision Guidelines

R & D

1) Daze – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Increase Daze’s Performance by 0.9, and reduce Size by 0.9.
2) Dell – leave positioning alone, allowing the product to age further. Hold reliability (MTBF) steady. Example: no action required.
3) Dixie – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: reduce Dixie’s Size by 1.3, and increase Performance by 1.3.
4) Dot – improve positioning and reduce age. Improve reliability to enhance demand. Example: Increase Dot’s Performance by 1.4, reduce Size by 0.5, and increase MTBF by 1000 hours.
5) Dune – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Reduce Dune’s Size by 1.4, and increase Performance by 0.4.

MARKETING

1. Daze – hold price high, increase promotion and sales budget. Forecast sales as an improvement from last year. Example: price $29.00, promotion budget $2200, sales budget $2200, and sales forecast 1500.
2. Dell – hold price high, increase promotion and sales budget. Forecast modest unit sales growth. Example: $23.50, promotion budget $2200, sales $2200, and sales forecast 1700.
4. Dot – hold price high, increase promotion and sales budget. Forecast improved unit sales. Example: $34.00, promotion budget $1800, sales $1800, sales forecast 500.
5. Dune – hold price high, increase promotion and sales budget. Forecast flat unit sales. Example: $34.00, promotion budget $1900, sales $1900, sales forecast 450.

PRODUCTION

1) For each product, schedule production using the formula: (UnitSalesForecast X 112%) – InventoryOnHand.
2) Make no improvements to capacity or automation at this time.

FINANCE

1) 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 plus Inventory. You do not care about the mix, but you do want to have adequate
reserves to cover unexpected swings in inventory.

2) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue additional stock or additional bonds. If you are cash rich, pay dividends.

3) Do not issue Short Term Debt.

SAVE DECISIONS

PRACTICE ROUND 3

Decision Guidelines

R & D

1) Daze – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Increase Daze’s Performance by 0.9, and reduce Size by 0.9.

2) Dell – reposition Dell to the current leading edge of the Low End segment. This will take 1.5 to 2.0 years, and it will sacrifice both positioning and age. It is necessary, however, to keep Dell within the Low End segment in the long run. Example: Reduce Size by 2.2 units. Increase Performance by 2.2 units.

3) Dixie – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: reduce Dixie’s Size by 1.3, and increase Performance by 1.3.

4) Dot – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Increase Dot’s Performance by 1.4, and reduce Size by 0.5.

5) Dune – improve positioning and reduce age. Hold reliability (MTBF) steady. Example: Reduce Dune’s Size by 1.4, and increase Performance by 0.4.

MARKETING

1) Daze – hold price high, maintain promotion and sales budget. Forecast sales as an improvement from last year. Example: price $28.50, promotion budget $2200, sales budget $2200, and sales forecast 1700.

2) Dell – hold price high, maintain promotion and sales budget. Forecast modest unit sales growth. Example: $23.00, promotion budget $2200, sales $2200, and sales forecast 1800.


5) Dune – hold price high, maintain promotion and sales budget. Forecast improved unit sales. Example: $33.50, promotion budget $1900, sales $1900, sales forecast 600.

PRODUCTION

1) For each product, schedule production using the formula: (UnitSalesForecast X 112%) – InventoryOnHand.

2) Daze – no action.

3) Dell – no action.

4) Dixie – no action.

5) Dot – increase capacity 100 to 150 units.

6) Dune – increase capacity 100 to 150 units.

FINANCE

1) You may have Cash on hand to cover your plant and equipment investment. If not, issue stock to cover the shortfall.

2) 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 plus Inventory. You do not care about the mix, but you do want to have adequate reserves to cover unexpected swings in inventory.

3) Adjust your cash position to meet the guideline from #2. If you are cash poor, issue stock. If you are cash rich, pay dividends and buy back stock.

4) Do not issue Short Term Debt.

SAVE DECISIONS